Gentleman Farming.

OR any useful purpose, the old books on farming are rarely resorted to; new theories, new modes, and new machines, are the order of the day; and yet, there is an amount of curious information, and facts incidental to all human labor, in some of the older writers, that should not be lost sight of. The very best book on the subject of farming in America, was published in 1825, after the death of the author, Mr. John Lorain, who occupied a farm only a few miles from our own residence. He was an enthusiast, and sufficiently scientific to master all the theories then in vogue, some of which he was instrumental in disproving. His chapters on "Gentleman Farming" are so quaint, apt, and amusing, that we propose to devote a short space to a brief notice of his own experience.

Poets, with other writers, attribute to rural pursuits all the rational pleasures which constitute the chief happiness of man; but they appear to have forgotten that these beautiful scenes which they so elegantly describe, are the effect of immense labor and fatigue:—

"The bard who wrote
The silly trash of brushing dew away
To see the sun rise, hardly knew, I fancy,
What dew was made of, or the vile effect
That frequent soaking hath upon shoe leather."

These city gentlemen forget that agriculture, when properly pursued, under the most favorable circumstances, requires very great attention, both early and late, and that there are very few employments which have more crosses, losses, and disappointments, necessarily attached to them. An epidemic sometimes sweeps off live stock, as with the besom of destruction; mildew, smut, with numerous blights, excessive rains, storms, a scorching sun, drought, untimely nipping frosts, and insects as destructive as an invading army, destroy the farmers' most flattering expectations.

The gentleman commences his occupation with the information, perhaps obtained from books, that full-bred farmers do not generally manage their agricultural concerns anything like so advantageously as might be done; the farm is bought without duly observing that the different opinions of authors give contradictory theories; he has to learn, from his own practice, which is right, or whether the whole of them may not be essentially wrong. What that experience usually is, Mr. Lorain tells us some of the incidents.

The fish-pond and the icehouse have been constructed after all the details of the alterations and enlargements of house and barn are complete; the garden is greatly added to; exotic trees are introduced; the gravel is hauled six or eight miles; besides the pleasure of seeing, displaying, and using, the rare products of

nature, it is probable that the gentleman has been led to believe, from observing that the nurserymen obtain very high prices, that his gardener and market man may readily dispose of the increase arising from the original stock to considerable advantage.

Let us see him, now, with his summer-houses built, his lawn nicely sodded, the old orchard that used to supply his predecessor, uprooted, and planted with new fruit-trees, and every new implement of husbandry procured; these his workmen do not, probably, know how to use, and having a mortal enmity to novel implements, too often purposely break and destroy; he has purchased plenty of working horses and oxen, of the best quality, and most exorbitant price; he is determined to excel in the first cattle show, and cost is no consideration. How he will rejoice to see his name in the Report, as having carried off the first premiums! But his fine, stately cows are carelessly milked, and become dry before the time of the Fair; he has the mortification, instead of selling butter and cheese, of depending on the plain, practical farmers around him, for more than half the year, and his cheese, if any happen to be made, is never fit to appear at his own table.

Manure, he knows, is an important element, and his carts are employed in bringing large quantities from the city, where he pays a high price—for straw! His manure, owing to his own ignorance, costs him twice that of the practical farmer, who purchases it himself. When riding from a city, and we ask whose is that cart filled with long straw dung, we generally find it belongs to some "gentleman farmer."

All the alterations are completed; the army of masons, carpenters, painters, plumbers, and all who have waited on them, are dismissed; the gardeners, temporarily employed, are gone also, after the vast number of trees, shrubs, bushes, vines, flowers, and small fruits, are in the ground; the fence-makers, blasters, ditchers, ploughmen, carters, and laborers, necessary to get the place in elegant condition for the wife to see and admire, with their wanton waste, depredation, and idleness, that usually take place on such occasions, are gone. The family is moved from town, and a short scene of rural delight really ensues. Tom has a pony, and Louisa a cob; father and mother live over their bright expectations, till Tom is thrown and breaks a leg, and Louisa declares she never will mount a horse again. These two grain-eaters are to be sold, but will not bring half price! How odd! The owner begins to suspect he has expended, in useless brick and useless mortar, in ornamental buildings, and animals, an amount that was scarcely justifiable. But he says nothing of this to his wife. She, poor lady, finds the neighbors have little sympathy for her ways, and she begins to think that all the useless toys, only fit to divert little minds, have been collected at too great a cost; but she says nothing of this to her husband.

The gentleman farmer now believes it is time to get some returns for his vast outlay. He has known, from experience, that country products command high prices, especially when they consist of an early supply of such articles as the seasons, with good management, produce; that many living in the vicinity of cities

had, from small beginnings, amassed considerable estates in that way. Expensive preparations are made for marketing, but, unfortunately, he forgets that people who got rich in this mode, go with these articles to market themselves; are acquainted with the business, and, if anything is left after the usual hour of sale, they know the dealer it will suit, and how to obtain the best price for it. The farmer returns to his work as soon as market is over; *his* wife and children are busily employed in the gardens, or field, and their presence and example keep his laborers at work while he is from home. The gentleman is very differently situated; everything is hired, and the examples set by one or another are exactly calculated to promote idleness, chicanery, and fraud. However, a beginning is to be made, and his golden project is commenced.

He hires a man, who, he is told, is well calculated to drive the wagon, and sell what may be sent to town. Being now, as he believes, completely fixed, a well assorted load is ordered, and the man is to start early the ensuing morning. This finds employment for the market-man, and several other laborers, the whole afternoon; for, after the vegetables, fruit, &c., have been gathered, they must be properly arranged for sale, and the people take care not to hurry themselves in this tedious employment. In fact, the gathering and fixing alone too often cost the gentleman more money than he receives for the whole load. But the market-man has overslept himself, and before he gets cleverly settled in market, the industrious common farmer is gearing up to go home; of course, the gentleman's load hangs heavy on hand; this is soon observed by some keen-eyed huckster, who, at a proper time, makes a bid for the whole. As no purchaser had for a long time appeared, the bargain is closed, and the salesman starts for the farm. The gentleman is astonished when he sums up the scanty returns; but the market-man gives ingenious reasons why it so happened, taking care to keep the real cause out of sight; and, as he rises earlier the next trip, his returns are better, though far below his employer's expectations. Thus the business generally goes on, sometimes better, and sometimes worse, till the expected golden shower is arrested. The market-man is tempted to the tavern; the horses are left standing at the door; hunger induces them to move off. The man returns at twelve at night, and informs his employer that he stopped at a *friend's house* on the road; that the horses had run off with the wagon, and he could neither find nor hear anything of them. All the men on the farm are immediately mounted, and sent off in different directions, but the team is not found till the middle of the ensuing day, with the wagon fastened between two trees. Such was Mr. Lorain's own experience.

This is a melancholy picture, too often realized by persons unused to farming; if the purse is able to bear such results, it is not so bad as where a deficiency, caused by unforeseen expenses in building and improvements, is expected to be made up by profitable sales.

The better plan is to begin moderately, with a moderate-sized farm, to study the subject a little before incurring heavy outlays, and to make improvements by de-

grees. Happiness does not consist in costly elegance; neatness, comfort in each department, will be first sought by a well-balanced mind; the errors we have only glanced at, it will be easy to avoid when they are pointed out in a friendly spirit; it should be the duty of friends to prevent the waste we have alluded to, by showing to the incipient city farmer, that the expenses about to be incurred may be so great as to prevent the enjoyment of the place after his death, by those for whom, probably, he had hoped he was preparing it; and even where this is not the case, he may assemble so many niceties, and expensive arrangements, that no widow, however wealthy, would choose to be burdened with maintaining them. As a looker-on, during many years of prosperity among our mercantile and professional friends, we have observed numerous instances of this mistaken policy which confounds expense with happiness, and have too often seen the great establishment abandoned, in disgust at *gentleman farming*.

After all, the true thing for the country is *country life;* city habits, and city furniture, late hours, and large parties, with accompanying headaches, do not prepare the mind to enjoy the song of the robin and the oriole. Sunday quiet, exchanged for a rush of city acquaintance, with their horses to be entertained as well as themselves, are not very acceptable to your cook and ostler; while a few congenial minds to pass a week, more or less, with you in quiet intercourse, is the *summum bonum* of retired leisure. It will not do to calculate, for the country, on too much enjoyment being crowded into a small space of time, for there, as elsewhere, it is not to be found. Repose, and contemplation on the duties of man's existence here, moderate work, study, and a daily effort to promote the happiness of others, will give more real satisfaction than large mirrors, and a service of gold.

BIOTA ORIENTALIS, BIOTA PYRAMIDALIS, AND TAXUS ADPRESSA.

TRANSLATED FROM THE REVUE HORTICOLE.

My object in publishing this brief article is to clearly establish the difference existing between two species, which, although perfectly distinct, have often been confounded with each other, or regarded merely as varieties. Their frequent culture from the seed during a long series of years, proves this to be the case. M. Trove has long since established this fact. The drawing and accurate description of it given by him in the memoir of the Academy of Naples,[1] under the name of *Thuia pyramidalis*, leave, in my mind, no doubt upon the subject.

One of the species, now under consideration, the *Biota orientalis* (Fig. 1), commonly called the Chinese Thuia, is that generally used in the construction of a blind or screen, as well as, in our cemeteries, to take the place of the cypress. Its straight branches, its numerous and compact ramules, arranged in the shape

[1] Mem. Acad. Neap., 35, tom. 3.

of a palm-leaf, or a fan, clearly distinguish it from the following (Fig. 2), which the gardeners, in France, generally designate under the name of *Thuia Nepalensis*, or *T. tatarica;* the latter is much more bushy; its branches, although numerous, and straight, are furnished with delicate ramules, more elongated and divaricated than the former, imparting to it a peculiar and distinctive appearance.

Independently of this very different aspect, the shape of the cones will not permit us to confound it with the *Biota orientalis* (Fig. 1), in which each scale of the cone, which is regular, presents a point or straight prolongation, either slightly curved at its apex, and gibbous, or somewhat dilated and enlarged at its base. In the *Biota pyramidalis* (Fig. 2), on the contrary, the scales of the cones, which are irregular, are furnished, toward the apex, with a long, subcylindrical point, curved at its extremity. The drawing of the ramules, accompanying the cones in the two species, exhibits the difference much more clearly than any written description.

Fig. 1.

Fig. 2.

We will avail ourselves of this opportunity to justify the name of *Biota*, and recommend it to our brethren instead of that of *Thuia;* for, if too great subdivision is wrong, too great generalization is equally so; on the one hand, objects which are closely suited, are too widely separated; and, on the other, those which have no affinity are included in the same class.

In the first place, the *Biota* is a native of the Old Hemisphere, while the *Thuia*, properly so-called, has reached us from the New World; no exception to this geographical distribution is as yet known. In the *Biota*, the cones, which are large and subglobular, are formed of thick and woody scales, having, at their base, seeds which are almost osseous, and ovoid, rounded, or subconical, sometimes slightly compressed, and entirely unfurnished with wings. In the *Thuia* (*T. occidentalis*), on the contrary, the cones are small, oblong, or subcylindrically elongated, slightly thickened toward the middle, and formed of very thin, cartilaginous, and cork-like scales, having, at their base, very delicate, compressed seeds, of cartilaginous consistence, always provided with a membranous, and nearly transparent wing. By contrasting the two genera, their characteristic marks will be more apparent.

BIOTA.	THUIA.
Habitat.—The Old Hemisphere.	*Habitat.*—The New World.
Cones.—Subglobular, with thick scales, ligneous at maturity.	*Cones.*—Elongated, subcylindrical, with thin, dry, and almost cork-like scales.
Seeds.—Ovoid, or conical, or scarcely compressed, hard, always unfurnished with wings.	*Seeds.*—Slightly compressed, almost cork-like, always furnished with a membranous wing.

Lastly, if we compare the characteristics of vegetation, we shall find that the species of these two genera are very readily classified, and that botanists were correct in separating them generically.

Fig. 3.

Fructification is, undoubtedly, the most important of all characters in establishing the generic differences of plants, and that which leads to a most exact and critical classification. The *Taxus adpressa* (Fig. 3) is a manifest proof of the truth of this remark. Considered by some as belonging to the genus *Cephalotaxus*, and, by others, as a *Taxus*, it, in this way, wandered between two genera, although intelligent horticulturists had practically recognized its relations with the common yew, of which, perhaps, it is only a peculiar form. This degree of affinity, or parentage, had been developed by engrafting. In fact, when the *Cephalo-taxus* is engrafted on the *Taxus*, it either does not take, or if it does, languishes, and lives but a short time. But, if this pretended *Cephalo-taxus* is inserted in a yew, it takes readily, and may flourish for years. This mark of organic affinity refers it most evidently to the *Taxus*, and the accompanying figure leaves no doubt on the subject; the *Cephalo-taxus adpressa* of our nurseries should, therefore, most certainly bear the name of *Taxus*. CARRIERE.

THE LOVE OF NATURE.

BY C. L. SPENCER.

BEAUTIFUL sentiments, expressed in fitting language, take a strong hold upon the heart, and are never entirely obliterated from the memory. The opening lines of our own Bryant's *Thanatopsis*, beautiful and truthful, as every lover of nature must acknowledge, furnish food for cheerful thought and heart-ennobling reflection:—

> "To him who in the love of nature holds
> Communion with her visible forms,
> She speaks a various language."

Yes, nature speaks to the heart of man in a language which cannot be misunderstood. At every season, and in all her various aspects, she proclaims the goodness of Him whose face through her is made visible, the beauty of truth and virtue, and the deformity of falsehood and vice.

Nature is always true and beautiful; that which does not accord with nature is always false and ugly. The painter who takes nature for his guide is sure to succeed, while he who leaves nature for "the schools" is as sure to fail.

We love Cowper, Wordsworth, and Bryant, because they are nature's pupils, singing of what they have seen and felt, and not of what *might* have been.

There is no discord in nature; all her operations are harmoniously performed. The grass and the beautiful flowers spring up at their appointed season; the trees put on their emerald robes; the brooks pursue their wonted course; the sunshine and the showers invigorate the growing plants, and in the autumn we behold the result.

Nature's laws are so harmonious that a superficial observer would suppose her to be governed by no laws. Yet they are inflexible, and are never transgressed; and he who has an eye to see the beauties of the fields and woods, and an ear to hear the anthems which swell in every valley, and on every hillside, cannot fail to appreciate the vast store of enjoyment and instruction which is spread out before him.

NICKAJACK APPLE.*

THIS very fine and beautiful Southern Seedling Apple originated in Macon County, North Carolina, among the Cherokee Indians, in the vicinity of Nickajack Creek, from which the name is taken. It was first brought into notice by Silas McDowell, Esq., of Franklin, North Carolina, a most industrious and enthusiastic pomologist, who sent me scions and specimens of the fruit four years ago. It is one of the best of our winter apples, keeps well until April, and, grown at the North, will no doubt keep till June or July. *Size*, large. *Form*, rather more oblong than flat. *Skin*, smooth. *Color*, dark-reddish purple to a lighter brownish red, striped on an olive-green foundation. *Stalk*, short—about ½ inch. *Flesh*, yellow, subacid, and very palatable.

JOHN R. STANFORD, *Clarksville, Geo.*

QUEEN APPLE, OR NIX'S GREEN.

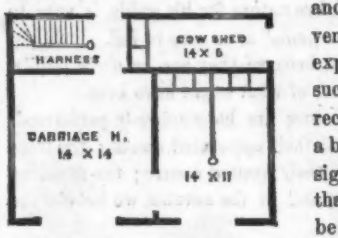
THIS very beautiful Apple originated in North Carolina; it is one of the best fruits for early winter use, and was found in the orchard of Mr. John Nix, of Habersham County, Georgia. *Size*, varies from large to very large. *Form*, flat, or nearly so, and much the largest at the stem end. *Skin*, very smooth, of a yellowish-green color. *Flesh*, tender, subacid, and very pleasant to the taste. Ripens November to January, here; further north, would keep till March.

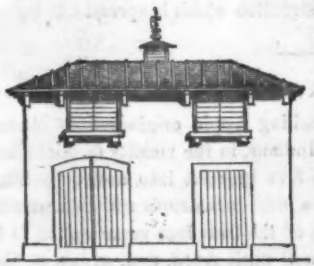
JOHN R. STANFORD, *Clarksville, Geo.*

* See Frontispiece.

CARRIAGE HOUSE AND STABLE FOR A SMALL COTTAGE.

A SUBSCRIBER requests us to give a plan and elevation of a cheap carriage-house and stable, to have a neat exterior expression, and, at the same time, not infringe on the convenience and space within; he also limits the expense to $250—a very small sum, indeed, for such an edifice. The annexed plans will correctly convey the only manner in which so cheap a barn can be constructed, without entirely losing sight of ornamental effect. We will premise that the material is wood. The posts should not be less than 8 by 12 inches; the sills should be somewhat thicker; the remaining sticks can be 6 by 9 joist, and 3 by 4 scantling. The weather boarding should be secured perpendicularly to the frame, and the joints protected by narrow strips, bevelled; finish the inside with rough hemlock boards, filling the space between the out and inside boarding with oat straw, rammed down compactly. A stable cannot be too warm.





The ground plan exhibits a carriage room, 14 by 14, with an entrance from the front side of the building, and is also in easy communication with the harness-room and stalls. The stalls are each 14 by 5½, containing crib, feeding troughs, &c. They also have a door in the front. As a cow is indispensable to the cottager, we have provided a suitable apartment for her winter quarters. It is 14 by 5. The hay loft is arrived at by a stairway contiguous to the harness-room. The loft is so arranged as to permit of foddering both horse and cow from nearly the same openings. To secure proper ventilation, and also to add a decorative feature, a small cupola is attached to the roof, rising from the centre.

A very durable and cheap paint for a barn is produced by mixing common French yellow (worth about five cents a pound) with lamp-black, which creates a beautiful, clear olive, and will keep color for several years.—*Hort. Review.*

Pteris argentea.—Adiantum formosum. Sarracenia Drummondi.—Adiantum cultratum. Pteris macrophyllus. Daria diversifolia.

FLOWERS AND BOTANICAL NOTES.

BY W. S. COLEMAN.

Here spreads a range of level plots,
Of box-fringed beds, where lurking knots
Of buried flowers repose, to bring
Kind greeting to the early spring.

The brightest flower of the winter garden—the very gem, until the crocus comes to rival it—is the winter aconite. The old writers called it yellow or winter wolf's-bane. Clare well describes this flower—

The winter aconite,
With buttercup-like flowers, that shut at night;
Its green leaf farling round its cup of gold,
Like tender maiden muffled from the cold.

The fern tribe may certainly claim our attention as possessing the qualities most worthy of interest; many of the species being evergreens, they give a fresh, verdant appearance to the conservatory when it is forsaken by the gay flowers of summer; or, if grown under a glass shade, or "temple," they form a delightful ornament to the dwelling-house at all seasons.

In the above group a variety of these graceful forms are given, and, as their attraction lies principally in their form and transparent texture, our descriptions of each individual will be very brief.

The large-leaved brake (*Pteris macrophyllus*) is a very fine species. The leaves are almost entirely surrounded by a thickened margin containing the organs of fructification.

Adiantum formosum and *A. cultratum*, two species of maiden-hair, have the glossy black stems and delicate leaves so well known in the British maiden-hair fern.

Pteris argentea (the silver brake), and *Daria diversifolia*, are the other two species represented.

The large centre object is a most remarkable species of side-saddle flower (*Sarracenia Drummondi*). In the summer it bears curious purple flowers, but its chief interest lies in its wonderfully-formed tubular leaves: they have somewhat the shape of a post-man's horn, are about two feet in height, and of a vivid green color, except at the upper expanded end, where they are most beautifully marbled with red, green, and white. This plant requires a very high temperature for its cultivation, as much as from 80 to 100 degrees.

A FEW REMARKS ON LATE GRAPE CROPS.

BY WILLIAM CHORLTON, STATEN ISLAND, NEW YORK.

IT will, no doubt, be well remembered by many, that on the 4th Nov., 1854, there was a severe frost, which entirely destroyed the leaves of the grape-vines in most of the late graperies in this part of the country; and also after the following severe winter, when the plants ought to have burst with usual vigor, that the buds *broke weak* from excessive bleeding, which proceeded from longitudinal strips along the canes, and this to such an extent that, in some instances, heading back had to be resorted to in order to again get healthy wood, the collective consequences of which were, that some crops were below medium, and others partially injured. So sudden and unexpected was this frost, that it is doubtful if one in ten would have applied fire heat if they had had the means; notwithstanding, there was an opportunity for assailing the principle of growing the exotic grape under glass without artificial heat. Now, while we admit that a temporary heating apparatus is of service occasionally, there is no reason in condemning *in toto*, as is often done, either this or any other equally economical qualification, when a little foresight and understanding will remedy the expected contingency; and perhaps there could not be a better example than the one now before us to prove the necessity for a gardener to possess some knowledge of the anatomy of plants. To make this appear plain —supposing a man, in whom is combined physiological and practical experience, on seeing the wholesale slaughter of the leaves, those sources of assimilation and evaporation upon which, only the day before, he cast such a cheerful look, he would thus soliloquize to himself: These leaves are destroyed too soon, before they have done their destined duty; they have not evaporated so much of the moisture as they would have done provided they had not been cut so prematurely; consequently, it will be best to prune immediately, that the light and air may act upon the surface of the bark more readily, by which the drying process will be somewhat assisted; they must also remain exposed so long as the weather will permit, but with all that can be done, there will be an excess of fluid in the canes, rendering the cells more than usually subject to distension and rupture during severe frosts. Some extra covering will also be necessary, and this placed loosely, so that a free circulation of air may pass amongst the vines. So far as can be, cold must be excluded, and sudden changes of temperature avoided.

After such severe winters as the last and the previous, he would again reason: With all the care taken into account, it is likely that some laceration of the cells, which are formed longitudinally amongst the vascular tissue, may have occurred in consequence of the expansion by frost of the over-abundant liquid matter contained, and which ought to have been dissipated in the fall, and, to prevent further mischief, it will be advisable to endeavor to obtain an even action

over the whole structure; this may, in part, be accomplished by keeping the vines covered from the invigorating action of the sun's rays until a few more of the cold "snaps" have passed over, and when the buds can no longer be kept back, instead of tying down the tops as usual, which has a tendency to retard the upward progress of the rising fluid, or rather to compel it to take a lateral course, thereby forcing it, while still in a watery state, to ooze out through the sides of the injured cells. The better plan will be to tie the vines up at once, which will assist in enabling it to flow more freely upwards, and over every part alike, the probability being that it will the more surely combine with the stored-up and more solid material, which is intended by nature, at this period, to furnish the substance for fresh cellular matter, and so fill up all interstices in the form of a mucilage, that will harden after a time, and repair the mischief in the same way as the healing of a wound in the animal body. In this particular peculiarity there is no occasion to be so exact about the lower buds, for if the injury that is to be apprehended has been done, there will be sufficient stoppage to the upper permeation this season, without any extra curtailment of the plant's natural action, which, when once obtained, will repair all former injury.

This simple reasoning may be thought "small talk" by some of your readers; but I can answer for it that one crop of grapes, at least, was received in fine condition last year where it was put into practice, while some others in different places showed the lack of it, and it is purposely sent at the present time to prevent, if possible, a repetition of similar casualities, which are likely to occur from the intense cold of the late winter.

I would add, in conclusion, that many of the cherries and a few other kinds of trees here are being split from the bark to the centre, the whole length of the trunks, by the action of the frost and dry, cold winter winds. (*Query.*—Is not this the cause of "gumming?")

SUGGESTIONS ON THE CULTIVATION OF THE GLOXINIA.

BY DANIEL BARKER, UTICA, NEW YORK.

Amongst the numerous plants which are highly deserving of more universal cultivation, and a greater degree of attention, than is usually bestowed upon them, the Gloxinia stands conspicuous in an eminent degree. Although plants are to be met with in many collections, it has but rarely been in that state of perfection of which it is susceptible, being, for the most part, subjected to only the ordinary treatment of a miscellaneous collection of greenhouse plants.

The plants, comprehended in the natural order, to which the Gloxinia belongs, are, many of them, inhabitants of deep-shaded dells, or of their immediate vicinity, in the tropical parts of the world. Many of them have their habitation on old decayed logs, and other rich decaying vegetable matter, while others grow upon

more elevated and exposed situations: the genus under consideration belongs to that section which thrive, in all their native luxuriance, in the deep shaded valleys of Pernambuco.

To cultivate it with success, the following conditions demand especial attention: that the roots be allowed abundant means of spreading in a horizonital direction; in order to effect this, I have used large garden pans, or feeders, in lieu of pots, for the last shift, with the best success. If large specimens for exhibition, or otherwise, were desired, I use them of the size of twelve inches over, and five deep, allowing one inch for effectual drainage, which must be strictly attended to throughout their entire growth, from the seed, or cutting, as the case may be, to the final shift into the flowering pans.

The first process of raising the plants is by cuttings (leaves, with the entire petiole attached); this can be done at any time after the leaves have attained their full development, which, under ordinary circumstances, will be from June to August—the earlier in the season the better, in order that the young bulbs may become sufficiently strong to put forth their lovely blossoms in abundance during the ensuing season.

Fill the cutting pots, to within three inches of the top, with broken crocks; upon these a layer of sphagnum (bog moss); then fill to the rim with clean sand, and saturate with water; afterwards, insert the cuttings (leaves), removing them to a gentle hotbed, being careful to shade during the warmest part of the day; in this situation they may remain until they have attained a sufficient size to transplant, which should be done into two-inch pots, using a compost of decayed vegetable mould, with about one-third sandy loam, which should have the additional care of being well and effectually drained. When potted, they are again placed in a gentle hotbed, until sufficiently established to be placed in the greenhouse, where they may remain until the leaves die down; after which, they may be placed under the stage of the greenhouse, being careful to place the pots upon their sides, in order to prevent any moisture coming near the bulbs, and not too near the flue, as this would cause the buds to shrivel up; in this situation they may remain until the following March or April, when they may be repotted, being careful to shake all the mould from their roots; to the above-named soil, add one-third of partially decayed wood, with a few uneven pieces of charcoal, which, while they have the effect of retaining moisture about the roots, will also be the means of facilitating the escape of any which might be superfluous.

When repotted, place them in a shady part of the stove, or propagating-house, in a close and moderately warm atmosphere, paying attention to repotting as often as the plants require it, until finally removed into the flowering pans.

During their growth throughout the spring, and, indeed, until the flowering is over, keep them in a position where they can enjoy a partial shade, with a temperature of from 60° to 80°. As the season advances, the shady part of a greenhouse will be all the protection they will require; indeed, protected, in a cold frame, during the warmest part of the day, from the sun's rays—in such a situa-

tion, they will perfect their lovely blossoms, and last a much longer period in bloom than if left in the stove or greenhouse. The period at which they will be in bloom, if such a course be adopted, will be from about the end of June until September, varying as their maturity may be encouraged or retarded.

IMPATIENS JERDONIÆ.

TRANSLATED FROM THE REVUE HORTICOLE.

THE Balsams, to which the present species belongs, affect shady, damp localities, and the decayed mould of large forests in both hemispheres; they are annual or perennial plants, with cylindrical stalks and branches, smooth, frequently swollen at their articulations, and filled with a very abundant watery juice; the leaves are alternate, or opposite, nearly always dentated, and unprovided with leaf scales.

The common Balsam, introduced into Europe at the beginning of the sixteenth century, has served as the type of this family, to which the earlier botanists added a plant of the group of the Cucurbitaceæ, the *Momordia balsamina;* a whimsical connection, indeed, but one which indicates a tendency to generic approximations, founded, in this case, on the dehiscence of the fruit, which, at maturity, bursts open with great elasticity.

Like the Tropeolæ (Capucines), which resemble them, the Balsams present us with a remarkable variety in the color of their flowers, and the species under consideration exhibits this, in a high degree, in a mixture more curious than harmonious of green, yellow, and red.

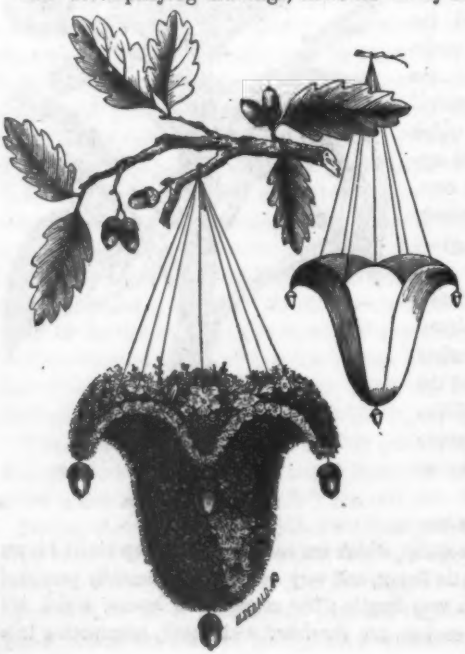
IMPATIENS JERDONIÆ.

The *Impatiens Jerdoniæ* is a native of the Neilgherry Hills; its stalks, which are carneous, of a deep violet brown color, and of the size of one's little finger, and very smooth, are generally provided with joints, which render them very fragile; the edges of its leaves, which are oval, thin, and of a bright green hue, are furnished with teeth, terminating in a

sort of brown or violet-colored gland; the flowers spring from the summit of short, axillary peduncles, and are supported by long, straight pedicles, of a beautiful carmine red color, the tops of which are lost in the bases of the calycine leaflets. Of these leaflets, the lateral ones are oval, lanceolate, of an herbaceous (greenish) color, whilst the upper one, yellow, and hood-shaped, has merely a green line in the centre; therefore, as may be seen, the *Impatiens Jerdoniæ* owes all its qualities to one of its petals; this portion of the flower, which is of a beautiful carmine red, and shaped like a bag, terminates, inferiorly, in a kind of hook, or straightened point, in the species under consideration, whilst, in others, it is extended to a cylindrical and delicate point, which has received the name of spur. In short, the original character of the flower of the *Impatiens Jerdoniæ*, and its profuse crop of flowers, make it desirable, and class it in our greenhouses with the *Impatiens platypetala*, *Hookeriana*, etc. Like the latter, and the *Imp. glanduligera*, *Royleana*, *fulva*, etc., which so greatly contribute to the beauty of groups planted in the shade, it requires the same care in cultivation. J. DECAISNE.

ORNAMENT FOR DRIED FLOWERS.

THE accompanying drawings, made for us by an accomplished lady, represent a pasteboard hanging vase, covered with moss, and attached to an oak branch, for a parlor ornament. From the material employed, it is better suited for dried flowers than those which require water.



The smaller basket represents the mode in which the pasteboard is united after being shaped, and the larger exhibits the same covered with moss. Every lady of the least taste can make these baskets, and ornament her boudoir, parlor, or sitting-room with her own handiwork, which she will enjoy more than expensive purchased objects.

The oak-leaves may be represented in winter in leather.

PROTECTION TO FARMS.

FROM A LETTER OF CHARLES DOWNING, OF NEWBURG, NEW YORK, TO THE EDITOR OF THE TRANSACTIONS OF THE ILLINOIS AGRICULTURAL SOCIETY.

When I saw the prairie land for the first time, it struck me very forcibly, and I have often thought of it since, how much more comfortable the inhabitants might be if they would plant hedges or wide belts of trees to screen them from cold winter winds, and also be a protection to their crops, especially fruit. If each owner of one or two hundred acres of land would plant their boundaries or division lines with belts of trees, say from twenty to one hundred feet wide, they would find it to their advantage and comfort.

Besides the protection, the trees would in a few years, when large enough to thin out, be valuable for firewood and timber. An objector might say, "It would be very expensive to procure and plant such wide belts of trees." To such I would reply, that many kinds, one year old (which is large enough), could be imported very cheap from the English and French nurseries by the 1000, such as elms, ash, maples, beech, birch, linden, larch, alder, &c. Agents in New York city would order them on application.

The ground should be ploughed a year previous to planting, and well worked through the summer, with or without a crop, as most convenient. The following spring put in the plants from three to six feet apart; those which make the largest growth, such as elms, &c., plant on the back line, and so on with the different sizes, so as to have the lowest growing kind inside or front; the last or inside row it would be well to plant with evergreens, say Norway spruce, because it is a faster grower than evergreens generally, and small plants can be obtained cheap.

Osage orange, locust, and chestnut, being fast growers, would be desirable to mix with the above-named kinds.

Another plan would be to procure seeds of any of the fast growing kinds of trees, grow them in beds in the garden one year, and then transplant them in the belts or screens. But there would be failures and disappointments, and it might not prove as cheap and satisfactory as to import them.

But the quickest mode of obtaining a screen for protection would be to procure cuttings of some of the free and strong growing varieties of the willow, such as Salix triandra, S. Beveridgii, S. Purpurea, &c., which grow from forty to sixty, and seventy feet high, and very rapidly, too, in a deep moist soil, and very suitable, no doubt, to much of the prairie land. This, however, would not be so valuable for general purposes, when grown, as elm, maple, &c.; but would make its growth in about half the time.

For profit and quick growth combined, there is nothing probably equal to the common yellow locust (Robinia Pseudacacia); it will not only make a fine belt for protection in a short time, but for fencing posts and durable timber (espe-

cially ship building), nothing equals it; and it has always commanded a high price; and I think a portion of the western prairies might be planted with it, as a profitable investment. It is said there are two kinds, one durable and the other not; but I know of only one kind. It is possible, if grown on deep, rich, mucky soils, the timber would be coarse grained, spongy, and not as durable.

CRITIQUE ON THE APRIL HORTICULTURIST.

Parks versus *Villages.*—An accurate specimen of the taste and "designs" of these suburban villa speculators, who seek to cram honest, well-meaning city people into their contemptible seven-by-nine lots, called "sites for country residences," such as we see daily advertised in the newspapers. And a great many of these city folks are just soft enough to be duped by the sharpers! Why, in the name of wholesome air and sunshine, don't city people, who, with their families, want to spend their summers in the country, go out and find some quiet nook, or open spot of some acres, according to their wants, within striking distance of a railway or steamboat landing, away from the vulgar noise of a daily bread-wagon, milk-cart, or other town nuisance? There they can build themselves a quiet snuggery, with its cozy group of out-buildings among the trees, or under the rocks, or near a brook or river, and, for a few months of the year, withdraw from the cares of a vexatious world; look out at the heavens by day, so gloriously lighted up with the sun, and garnished with floating clouds; or at the moon, with its vast retinue of brilliant stars, by night; upon the earth, with its emerald of green, shadowed over with waving trees, or spangled with flowers giving out their delicious odors; and the happy birds, filling the whole air with music; ay, and the soul who has no sympathy with these, one and all, has no business in the country at all!

Thousands of such spots are within a few miles of all northern cities, both cheap and accessible. But, no. Such mode of summer life is *not the fashion!* Town folks must, when summer comes, pack up their finery, and fizzle off behind a vulgar steam-engine, of some sort, to some watering-place, where they vapor about for weeks in the daily pursuit of some nonsense or other; or, if not that, must have a country villa in some starched-up, maccaroni village, or neighborhood, populated, for the most part, with just such flunkies as themselves, where driving equipages by day, and dressing matches by night, and other like vanities, are the standing order. The "wimmin folks" must have "society," of course, to admire their finery; and the men, their dinner parties and wine drinkings, as if their eight or nine months of annual city life, in that sort of indulgence, could not cut short their lives fast enough. But, being too old-fashioned in my notions to set this wayward world right-end-up, I must even take a shot at folly as it flies, and let the folks drive their own "road to ruin."

Pear Culture. No. 2.—When Doctor Ward gets through, I'll "sum him up," as the lawyers say.

The Cotton Wood.—Go on, Mr. Allen. I will consider your "case" with the Doctor's.

Transformed Pears.—What will they do next out on the Mississippi? I have seen the prairie plum turn its young fruits into a sort of nodule, as they grew through the summer, something like the *galls* on the oak-leaf; but this is a new thing altogether.

Is the Kalmia Poisonous?—I *hope* not; although I have often heard that both sheep and neat cattle have died after eating their leaves. I think, with Nuttall and yourself, Mr. Editor, it is more probable that the indigestible quality of the leaves was the cause of death in the animals than any poisonous quality they possessed; for I have known thousands of cattle and sheep which grazed through the summer, in safety, on the hill and mountain sides, where the laurel grew in full luxuriance. How my old heart jumps back to early boyhood when I think of the beautiful Kalmia latifolia! I grew up among them; and how many times, in the joyous spirit of a young lamb, have I skipped among the rocks, and over the hills, when their blushing, brilliant beauty lighted up the ground, and filled the air with fragrance! The memory of those long passed days saddens me, and I will pass on to

Mr. Hodge's Cold Weather.—If he, and his Lake Erie neighbors, haven't had enough of that commodity the past winter, they had better remove down a few degrees south, where I learn they have enjoyed the genial atmosphere of 32° below zero, for days together. I hope the peach-trees have escaped this most *humiliating* frost; and with so great a body of snow on the ground to protect them, their chances are better than if the roots had been equally exposed as the branches. Mr. Hodge's pear experience is to the point, and I agree with him—that is, provided he and his neighbor, Mr. Allen, will settle the *real* virtues of that aforesaid "Orange" pear, which I recollect something about. The remarks of Mr. Hodge quite confirm my belief of the capricious vagaries of the pear family, in their contemptuous denials of flavor and good appearance when placed on soils and situations they dislike.

Domestic Notices.—J. M. Thorburn, seedsman, of New York, asks if "you cannot say a word in favor of 'Agrostis stolonifera' for lawns?" I trust you will say no such thing; but *I* will take the liberty to say a word, by asking another question. Is the humbuggery of these seedsmen, who would sell old Nick himself, if they could get anybody to buy him, never to stop? For lawns! In simple English, this "Agrostis stolonifera" is the *Fiorin*, one of the abominations of all good gardeners and farmers, commonly called *quack*, *couch*, or *twitch* grass—a perfect pest wherever it obtains foothold, propagating itself by the coarse, stout-jointed root, as tough as wire, and a vitality equal to the houseleek, or live-forever, of the gardens. Nothing but *burning* will kill it. It loves a coarse, boggy soil, and, for the credit of America, is not a *native*, but an European production, de-

scribed in Sinclair's celebrated catalogue of grasses, which he made up for the Duke of Bedford. Let the "South of Europe" cultivate it if they will, but deliver it from American lawns! Before this gets into print, perhaps a hundred tom-noddy lawn-makers will order the pestilent stuff for their door-yards, where they might better introduce the Canada thistle, for that *can* be extirpated. I have heard these "lawn grasses" discussed till I am sick of the very name, as if the beautiful turf of our natural pastures had neither beauty nor fragrance in them.

The finest grasses for American lawns we can have, are what grow on every roadside throughout the Middle and Northern States, and are, simply, the *Poas trivialis, compressa,* and *pratensis,* known under the common denominations of spear, June, and blue-grass; to these may be added the *Poa viridis,* or green-grass of Dr. Muhlenberg, and the common white clover—*Trifolium repens.* A mixture of all these, or either variety of the *Poa,* with the white clover, make the best possible American lawn grasses. Every spring of my life I have met people running about, half demented, inquiring where they could get "lawn grass seed," as if there was but *one* grass fit for it. The "lawn" grasses, advertised usually by the seedsmen, are either nothing but the common grasses of the country, or some tender "foreign" variety, totally unfit to withstand our heats and frosts, while the *Poas,* and white clover, make a soft, beautiful, compact turf, thick as wool, and requiring less cutting than any other grasses whatever.

Gardeners (page 179.)—A most sensible observer is Mr. Robert Weston. I want no man about me as a *designer* in ground architecture, who is not fit to be my companion, either in the parlor or at the table. A man of mind and cultivation he *must* be, to embrace all those requisites of taste and study which can accomplish him in the modelling and laying out of grounds, and placing of trees and shrubs. The sooner we Americans set about giving the right sort of encouragement to men of this profession, the sooner we shall relieve ourselves of the shoals of foreign charlatans, who throw themselves upon our credulity, and impose upon our ignorance.

A Suburban Residence.—Very well in style, but too much *outside* wall for the *inside* room it contains. I fear our house architects are running into the extreme in this particular. Why not have the outer walls of a house, instead of single, inclose *double* rooms? They would thus get much more space within a given range of wall, and at far less cost, and the rooms would be more compact, warmer, and, I think, in better character. The peculiar Italian style, too, can be quite as well preserved. The flat water-tables at the eaves in this house, are objectionable in point of *utility,* subjecting the roof water to detention and frost, and, in consequence, to leakage, which will stain and injure the walls. Our modern American architecture is too much assuming the *gossamer* style. After all, the old-fashioned, nearly square, compact form of our best country houses of fifty years ago, with *some* modern improvements in outside style, and conveniences within, are nearer

the mark than many a fine palace under the *reformation* in architecture; and so the public will say a dozen years hence.

How queer those women in the foreground of the picture look, with such a mass of distending whalebone under their petticoats! JEFFREYS.

THE STRAWBERRY SEEDLING.

BY "EMILE THE ELDER," PHILADELPHIA.

In the autumn of 1846, if memory serves me right, our clever "Aunt Charlotte" was at Paris, with her two youngest daughters, and while boarding at pleasant quarters in the great French capital (and capital it surely is in the eating department), she was daily served with delightful strawberries for dessert; the advanced season, no less than the very fine flavor of the fruit, made them a great luxury, and Aunt Charlotte expressed some surprise to her host, inquiring, at the same time, if the strawberries were from neighboring greenhouses? But being told that they grew in the open air, and were constant bearers, the idea immediately suggested itself of preserving some of the seeds for friends at home, and among these, a letter from Paris notified us that we should not be forgotten. Accordingly, our kind utilitarian Aunt crushed some of the finest berries upon thick brown paper, and, after exposing them to dry in the sun, carefully rolled up the paper, and placed it in one of her travelling trunks.

During that winter, our friend returned to the United States, by way of England; arriving at New York, her next destination was their homestead at New Haven, and there Aunt Charlotte took possession of her own furnished house, which had been rented for the term of her absence. Among the first duties, she ordered her newly-hired servant woman (or, as the good people of Connecticut sometimes call them—"helps"—probably because they allow their employers to *help* themselves), was to unpack the trunks, and put *the things* into the wardrobes and bureaus; finding, as she performed this task, a roll of common brown paper, she of course threw it into the fire, and, in another moment, the Paris Strawberry seeds were so many useless grains of ashes. Thus seemed to perish all the good intentions of our obliging Aunt Charlotte, who needed to be the cheerful and sensible Christian that she is, in order to bear patiently the heedless act of her Irish "help."

It was but a few weeks after this sad event when Aunt Charlotte came to visit us at "Clover Hill," and related the ill-fortune that had befallen her brown paper of seeds, some of which she had designed for us; and as she finished the account of her disappointment, the thought suddenly came to her, and she said: *"I have that very identical trunk here with me now, and I wonder if some of the strawberry-seeds may not have been rubbed off from the paper, and remained at the bottom of the trunk!"*

She went to examine, and, accordingly, on very minute search in all the corners and cracks, she returned triumphantly to the sitting-room with three little specks upon the palm of her hand, almost invisible to the naked eye, but which, she thought, *might* be some of the detached seeds. Handing them to me with a request that they should be tried, I went at once in search of a small flower-pot, and, spite of laughing doubts, filled it with light soil, and deposited the three grains of what seemed like just so much additional sand.

More merriment than hope attended my planting, and various were the speculations suggested, as from day to day I anxiously watched for the result of what others thought to be a hopeless experiment. The dispositions display themselves on small as well as great occa-

sions, and the inquiries from various members of our little family circle sufficiently evinced the view each had taken of my proceeding, no less than of the feelings they associated with its promises.

"*How comes on the little pot of sand, to-day?*" greeted me from one quarter.

"*Have you any show of strawberries yet?*" said another.

"Please tell Rosanna to save all the cream, *in case* father should bring over a dish of Paris strawberries, this afternoon," was a playful order given in my hearing, as I was about visiting my little pot of sand. And still, I daily went to the hotbed pit to examine the result of my supposed seed planting, and to sprinkle them from Lizzie's tiny watering pot.

Our good-natured gardener encouraged me to hope, and, with his Irish blarney, would say: "*Anything will grow*, your honor, in *sich* an *expose* to the south." "But surely, Patrick," I replied, "not unless I have really planted the seeds," which seemed to puzzle even Pat's politeness.

How tedious and almost endless are the days of doubt and watchfulness, and, at this date, I will not attempt to recall accurately the amount of time that gave a fixed number to those of my expectation; but, in the natural period required for seed to germinate, my patience met with its reward, in the appearance of what seemed to be a single embryo Strawberry plant. And when once its first feeble green shoot was fairly above the earth, and its tiny leaves began to assume form, all doubt was removed, and it grew rapidly into a positive, undeniable individual of the Alpine family. Nor was it until this state of progress in the character and appearance of my little pet plant, that I gave tidings, at the house, of my success; but, when its existence was duly announced, all were eager to see and manifest interest in its growth, and I received many warm congratulations.

It seems almost needless to attempt telling how anxiously, from that date, I watched and cared for the tender solitary little life, that seemed like a thing of my own creating.

> "As in the early spring
> We see the appearing buds, which to prove fruit
> Hope gives not so much warrant as despair
> That frosts will bite them."

The seedling grew apace, and Patrick, the gardener, ere long placed another flower-pot by the side of the first, and the running vine soon sent a sucker to take root there; this simple office being again and again repeated, ere the summer was spent we had about thirty plants of the same family, and were able to set out our beginning of a new Strawberry-bed in the open garden. There had been one or two blossoms on the original vine during its first summer's growth, but still, the fruit was unknown, and also the ability of the plant to endure the climate to which it had been transplanted. These were matters yet to be developed, but, meanwhile, the new-born stranger must have a name—ay, and a christening!

After hearing an endless variety of suggestions, most of which had some reference to myself—as "the 'Emile' Seedling"—"the Doctor Seedling," &c.—the ceremony of name-giving was duly and gravely performed—the sprinkling being still from Lizzie's tiny watering pot, pronouncing my bantling to be "The Clover Hill Seedling"—and thus rendering back to kind mother Earth the merit that belonged to her.

Strawberry time, the following spring, was most impatiently waited for, and when it came, our little bed did not disappoint us; for it yielded fruit, and the fruit was pronounced good; the berries, it was soon discovered, had one peculiarity most acceptable to those who unwillingly perform the task of hulling strawberries. "The Clover Hill Seedling" always leaves its hull upon the vine; indeed, it is almost impossible to pick them with the hulls on, and the fruit comes to the basket ready for the table, needing no second handling. It was soon ascertained, too, that our seedling possessed another great value or peculiarity, in being a constant bearer, from early strawberry time, until quite late in the autumn. The plants

only take a rest of about one month in mid-summer, and I have seen the pale berries covered with snow in December, when the sun had not the needed influence to color them.

Four summers have now so much increased our bed that we have an abundance of fruit, and have supplied many plants to friends at a distance; two families, in Virginia, have largely cultivated the "Clover Hill Seedling," and, we hear, have extended it freely in their neighborhoods; it has also travelled to, and taken root, in New Haven (not exactly Phœnix-like, rising from its own ashes), and in New York, and already the rare fruit has more than once given unexpected pleasure to the sick and suffering. Poor little Harriet, an angel of patience and humility, and the victim of a slow consumption, was made happy during the last weeks of her feeble existence, by the enjoyment of these strawberries, so unexpected in the autumnal months; when all other food had ceased to be acceptable to her wasted energies, and benevolent friends no longer could find other delicacies to tempt her appetite, it was delightful to witness the gentle smile with which the good girl would still welcome the "Clover Hill Seedlings." She was too feeble to utter words, but her countenance recalled Talfourd's lines:—

"It is a little thing
To give a cup of water; yet its draught
Of cool refreshment, drained by fever'd lips,
May give a shock of pleasure to the frame
More exquisite than when nectarian juice
Renews the life of joy in happiest hours."

Late in the month of November, 1850, Jenny Lind was presented with a dish of fine "Clover Hill Seedlings" by little Lizzie; it was difficult to determine which was made the most happy—the child whose feelings and fancy had been greatly excited by catching some of the public enthusiasm, and was delighted to approach the "Queen of Song," or the gentle woman, who, amid the extravagant attentions and adulation bestowed upon her, was surprised and charmed by the rare and simple offering from a bright little girl.

But even better than this, "Aunt Charlotte," her children, and grandchildren, almost annually enjoy the fruits of her single Paris seed: and if it be true, as a wise man has said, that "he who plants a tree, confers a blessing on his fellow-men," may it not be equally true that he who plants three doubtful seeds in a pot of sand, may do good to others, and bring infinite pleasure to himself?

Shall there be a moral to our story? and shall it not point to the blessings likely to ensue from faith and perseverance? It was the duty of faith to plant the supposed seeds; perseverance watched over them with interest, and Heaven has rewarded the work.

CLIMATOLOGY, NO. 2.

BY A CONSTANT READER.

Spring Climate of the United States.—A careful examination of the highly interesting *Army Meteorological Register*, shows that the mean temperature of the spring months is an important element in the characteristics of climate. We subjoin a few extracts to illustrate this fact. "The principal lines of the Isothermal chart differ five degrees in temperature, and east of the meridian of 100° they divide distance on the meridian with great uniformity. On the Atlantic side, the range is 35° of temperature for 22° of latitude; or, excluding the lower part of the peninsula of Florida, 30° of temperature for 17° of latitude, which is very nearly a decrease of temperature of one degree for forty miles of distance northward. The same decrease is found in the Mississippi valley."

Taking the mean temperature of the separate spring months, the mean temperature for April nearly represents the spring mean. Places having a mean temperature of 65° for May,

have 55° in April, and 45° in March. The following table gives the mean temperature for March, and the increase of the mean temperature from month to month, until June.

Stations.	Mean of March.	March to April.	April to May.	May to June.
Eastport, Maine	30.8	9.6	8.8	7.6
Portland, Maine	32.5	10.4	9.9	10.3
New York (Governor's Island)	38.3	10.4	10.7	9.
Mouth of Niagara River	34.5	9.7	11.5	9.4
Pittsburg (three miles N. E. of city)	39.	10.9	11.	8.3
Baltimore (Fort McHenry)	42.3	10.4	10.4	8.6
Washington (14 miles S. of capitol)	46.8	10.3	11.1	8.1
Augusta (three miles W.)	35.8	9.3	7.	7.
St. Louis (three miles below)	42.3	12.7	10.	9.2
Newport (opposite Cincinnati)	43.4	10.	11.4	8.8
Detroit	35.4	10.8	9.8	9.6
San Francisco	52.8	2.5	0.	3.5
Fort Vancouver (80 miles from the mouth of the Columbia)	44.1	8.4	6.4	3.7

The increase from March to April, and from April to May is nearly alike; while the increase from May to June is less—showing that the uniformity in the advance of the temperature belongs to a less period than three months. "The period we designate as Spring, is, on the whole, too long for identification as a single quantity in the continental temperate regions of this hemisphere. The natural seasons are unequally divided in time; in truth the winter and summer being longer, and the spring and autumn shorter than ninety days. An admirable analysis of ten years observations at Albion mines, Nova Scotia, has been made by their author, Henry Poole, Esq., by which it appears that the seasons there are naturally resolved into periods of sixty-six and sixty-three days for spring and autumn, and 120 and 116 days for winter and summer. The winter minimum temperature is January 20th, or thirty days after the solstice, and the summer maximum July 22d, or thirty-one days after the solstice. The mean annual temperature is passed on May 1st, and November 1st, forty-one and forty-four days after the equinoxes respectively.

A table is given of the means and of the extreme variations of temperature for the three spring months for thirty-four years from 1820 to 1854, at Fort Columbus, near New York, Fort Gibson on the Arkansas, and Fort Snelling at the mouth of the St. Peters, on the Mississippi.

	Fort Columbus.				Fort Gibson.				Fort Snelling.			
	Mar.	April.	May.	Spr'g.	Mar.	April	May.	Spr'g.	Mar.	April.	May.	Spr'g.
Mean	38°.3	48°.6	59°.3	48°.7	52°.2	62°.1	69°.8	61°.	31°.4	46°.3	59°.0	45°.6
Average departure from the mean	2°.30	2.59	2°.06	1°.80	3°.27	3°.2	2°.32	1°.72	4°.72	4°.20	3°.40	2°.94
Greatest departure	—8.	—5°.4	+5°.6	+3°.9	-13°.7	6.8	—6.5	+5.4	—26.8	10.9	+9.2	—12.1
Year of ditto						+1839				+1839		
	1843	1826	1826	1822	1843	—1850	1838	1826	1843	—1850	1829	1843
Greatest range	14°.3	10°.3	10°.5	7.8	23°.7	13°.6	11°.8	10°.2	34°.9	21.8	16°.3	17°.3

This table shows how irregular is our spring climate—how great are the oscillations of temperature—and that the greatest deviations are below and not above the mean. The extreme cold of March, 1843, was felt over the whole country. The extremes of temperature lessen as the spring advances. It is important to ascertain the districts in which the thermometer falls to the freezing point once or more in the course of a month.

"On the coast of California an examination of the minima for five years, affords but two instances of the observation of 32° in March; while, in the interior, and in Oregon, it may be anticipated several times in this month; though the lowest observed point at stations not much elevated, is 19°. In April it is never reached in California at the sea-level, or near it, and rarely in Oregon; at Puget's Sound, three times in six years. In May, there are no instances of its occurrence on the Pacific, except at stations elevated 2000 feet or more.

"At Fort Yuma, in the valley of the Colorado, the freezing point is never reached in spring.

"At all the stations in New Mexico, the temperature constantly falls below 32° in every month of spring, and at Fort Massachusetts and Fort Defiance, it usually does so in June.

"In Texas, there is no frost or ice in the lower Rio Grande Valley in these months, though it twice occurs at Fort Duncan, and the posts of that vicinity, in March. Perhaps a more extended series of years would give instances of severe frost in the principal portion of this valley in March, though there could be none in the following months. All the remaining portion of Texas has the occurrence of frosts in March regularly; in April for the lower districts very rarely, though they occur in half the years, or more, at the posts on the plateaux, elevated one or two thousand feet; but never in May, at any point not mountainous.

"In the principal area of the United States, eastward, the lower portion of the peninsula of Florida, below Fort Brooke, is the only portion not liable to frosts in March, in extreme years. From the year 1822, when observations were made either at that district, or so near it as to decide the point, twelve years occur in which the thermometer fell to 32°, or lower, as far south as Fort King, and, in two of these years, at least 1835 and 1843, it fell to the freezing point as far southward as Fort Brooke. In something more than half the years of the period now observed, the coast of the Gulf, and of the Atlantic to Charleston, experiences one or more instances of a temperature of 32° in this month.

"In April, the line of ice and frosts, or a temperature at or near 32°, recedes to Fort Monroe and Fort Gibson, and they are much more rare at either of these posts, than at Florida stations in March. The depressions of temperature within which they occur, are, however, frequently connected with falls of snow in the Atlantic States, and they usually affect the more elevated portions of all the States east of Alabama. In 1854, a heavy fall of snow occurred in the middle of the month in Virginia, and ice was formed in the vicinity of Charleston. Though frosts are quite frequent in this month at St. Louis, there are few instances of the formation of ice in the latitude of Fort Gibson; light hoar frosts occur in almost every year, however, and sometimes as far southward as Baton Rouge. These may occur at an air temperature of 43°, in the ordinary positions of the thermometer.

"In May, the line of ice formation rises to St. Louis, Cincinnati, Philadelphia, and New York, and, at these points, the temperature of 32° is not found in every year. Ice is formed during the first half of the month to this latitude, in the interior districts, however, quite regularly, and hoar frosts occur in the remainder, where the altitude is noticeable, and at some distance from the coast. At the close of this month, frosts disappear from all portions of the United States territory, except at the highest altitudes cultivated."

THE YEAST PLANT.

Country Lady Housekeeper.—"Cook, we are out of yeast; I wish you would make some."

Cook. "I never makes yeast; I always buys it."

Lady. "Yes, but it is too far to send to town for a pennith of yeast! How do you make yeast?"

Cook. "Well, I mixes flour, salt, and hop-water, and adds a pennith of yeast."

The poor lady is not able to discover how this will *originate* what is so indispensable, and hastens to the nearest neighbor with the question: "How do *you* make yeast?" Answer as before. "Mix flour, salt, and hop-water, and *add a pennith of yeast.*" This reply any lady who chooses to make the experiment will receive every time she asks, whether from neighbor, baker, or any one else. Let her try a scientific friend, and more probably than not the same will be the result, and she is sorely puzzled to know how it would be, if by any bad luck the whole country was to lose the source whence comes that important *pennith!*

So she inquires of everybody, gently insinuating that she wants the *pennith* left out in the answer; but, getting no satisfaction, she recollects that we *discovered* the vinegar plant, and she drove over to us. All our books were silent on the subject, so we applied to a learned botanist, who never allows anything that can be known to escape him, and here is his satisfactory elucidation of the mystery:—

Diastase is a peculiar nitrogenous substance, possessing the property of converting a large proportion of fecula into dextrin, and is found in the germ of the cerealia and tubercular vegetables; it appears to be formed at the moment of germination, at the expense of the albuminous matter contained in the grain, as it resides in the very origin of the germ, and, in the eye of the tuber; it is generally extracted from barley, which has sprouted by digesting the grain in water; it is applied in the arts for the purpose of obtaining dextrin, which is used in baking of pastry, and the manufacture of beer, &c. In the solution of sugar with albuminous substances, either vegetable or animal, after some time the solution becomes cloudy, and small, oval bodies are deposited, gradually increasing in size until they attain a visible diameter; during the first two hours, the globule exhibits nothing peculiar, but, after this period, there forms at the point of the globule a rupture—a second globule—which gradually increases until it has obtained the dimensions of the original; this second globule soon generates a third, which is attached to the side of the second, in the same way as this grew on the first, and so on, and this is the way the yeast plant grows. This plant is a species of microscopic vegetable, which is spontaneously developed in the organs of plants, and in a large number of nitrogenous substances, when left to putrefy, and is also formed by exposing to the ordinary temperature a solution of sugar mixed with albuminous substances, of vegetable or animal origin, as decayed cheese, spoiled meat, &c. It will hence be seen, that on adding an albuminous substance to a mixture of sugar and ferment, the sugar is not alone affected by the ferment, as the albuminous matter itself undergoes several metamorphoses, and is converted into yeast, which fact explains the reason why, in breweries, at the close of the operation, a quantity of yeast is made eight or ten times greater than that which had been originally used.

Raspail, in his *Philosophy*, says: "Starch consists of vesicles inclosing within them a fluid resembling gum; starch may be put into cold water without being dissolved; but when placed in hot water, these vesicles burst, and allow the escape of the liquid. This liquid is the *dextrin* of Biot, so called because it possesses the property of turning the plane of the polarization of light to the right hand." The way the pastry-cooks get it is, by putting starch in hot water. To which it may be added, that the credit of establishing the true nature and properties of the yeast plant is due to Caynard Latour, who, some years ago, proved that the conversion of sugar into alcohol and carbonic acid was caused by the presence and growth of the Torula cerevisiæ, a cryptogamic plant, existing only in the form of globules, and Blondeau subsequently has thus described the nature of yeast: "There are two species of germs present in yeast, those of the Torula cerevisiæ, and those of the Penicillium glaucum; the germs of the first (the true yeast plant) multiply with great rapidity, but never form stems, or deviate from the globular condition; the Penicillium glaucum also multiply, first in globules, but they soon extend themselves, unite, and form an arborescent vegetation, and are so much smaller than those of Torula cerevisiæ, that they can be readily separated by filtration. Perfectly developed stems of Penicillium glaucum always form on yeast when exposed for a length of time to the air, and always lose their property of fermentation when exposed to a heat of 212° Fahrenheit; the plant being killed by that temperature; the most favorable temperature is from 68° to 73°. It is now positively ascertained that the yeast globule (Torula cerevisiæ) is a plant possessing a cellular structure, consisting of an external envelop resembling lignin, and of an azotized internal substance.—C. J. Wister.

FOREIGN NOTICES.

MRS. CATLEUGH'S NURSERY, HANS PLACE, CHELSEA.—This is one of those places in which certain kinds of plants are grown by the thousand for Covent Garden market. It is, therefore, not uncommon to see here a large houseful of Pelargoniums all in full flower at one time, another of Heliotropes, and frames some hundreds of yards long stocked with Mignonette. Potfuls of the latter sown in September last, and wintered in low, cold frames, will soon be in blossom. Mignonette, we need scarcely state, is sometimes sown in small pots, with the view of economizing room; but, where space is no object, it gives less trouble, and succeeds equally well sown at once in the pots in which it is to flower. It may be wintered in a shallow frame, as has been done here, from which the lights should be removed entirely in fine weather, so as to give as much light and air as possible. Many complain that they lose their Mignonette in winter; but this is, for the most part, owing to their keeping it too damp. It should have little or no water for about three months during the dull season, and care should be taken to keep it free from drip, which is sure to kill whatever plants it happens to fall on. When small pots are employed, particular care need not be taken to have the soil very rich, provided it is light; but, when sown at once in the flowering pots, richer material should be used, draining well, and placing on the top of the crocks flaky pieces of decayed manure, for the double purpose of affording nourishment to the plants when they are coming into bloom, and for keeping the soil from choking up the drainage. Autumn sown plants, which were shifted into larger pots about Christmas, will blossom from the present time till about May, and another sowing now will succeed them, after which it may be had plentifully in the open ground. Even the worst potfuls should not, however, be thrown away, for, if topped back about this time, they come in nicely for window-boxes in May, which may be managed in the following manner: Having some Tom Thumb Geraniums (any other dwarf, showy plants, as Intermediate Stocks, would do), three of these are placed in a box, one near each end, and one in the middle, and between them are introduced carefully, so as not to break the balls, pots of Mignonette, filling the boxes up with rich, light soil, and finishing with a good watering to settle the earth round the roots. The after-treatment consists in keeping the boxes watered always when they require it, and, be it remembered, that if Mignonette is ever allowed to flag, it seldom succeeds so well afterwards. Boxes thus arranged are greatly admired during the summer months, the Geraniums giving brilliancy of color, while the Mignonette furnishes all that is wanted in the way of scent. In addition to the above, all kinds of spring bulbs are grown extensively here, and are at present very gay. Hyacinths potted, and wintered out of doors under ashes, are now moved into heat in succession as they are wanted, and soon burst into bloom. Azaleas and other shrubs are also forced into flower for bouquets, for which, at this season, there is always a good demand. Below the stages of different houses in which no more fire-heat is used than just what will keep out frost, are large beds of most excellent Rhubarb, from which the market supply for weeks has been derived. This has been obtained from roots which were moved under glass soon after Christmas, placed closely together, and covered with soil. The sort is the Victoria, which, although, perhaps, not so red as Salt's Perfection, and some other kinds, is a vigorous grower, and deservedly a general favorite.

VEGETABLE PATHOLOGY.—VENEFICIUM (*Poisoning*).—Plants having only very limited powers of choice as regards the matter absorbed by the spongelets, whatever is really held in solu-

tion by the water they imbibe must pass with it into the cell cavities, and in those cases where substances such as silex are taken up more freely by one plant than another, the difficulty depends probably on mechanical laws which, at present, we are unable to appreciate. If, however, the choice of the spongelets is limited, that of the stomates is still less so, so that whatever gaseous matter may be contained in the atmosphere will find a ready admission to the inward parts of the plant. It is obvious, therefore, that as the exigencies of plants are very different, and the same nutritive matter, or, rather, the same proportions of it, will not suffice for the maintenance of health in all, even under ordinary circumstances, disease may arise from a deficiency or redundancy of particular elements in the soil and atmosphere. The salt steppes of Asia produce only such plants as delight in the particular mineral which abounds in them, or are as able to tolerate it in such large proportions. In land, again, over-manured with guano or other animal matters, health, or even vitality, cannot be maintained, where the proportion is such as to exceed greatly the wants of the species. Wheat, for instance, will not flourish where there is a total absence of silex, nor cabbages where the proportion of nitrogenous matter is very small. In some cases, indeed, superfluous matter which could never pass off by the stomates, is stored up in the cavities of the cells, as the crystals of oxalate of lime which form such a prominent and interesting feature in the leaf cells of figs, hops, and many other plants, the rhaphides with which so many vegetable cells are gorged, or the carbonate of lime in charads. There is no reason to believe that these matters are deposited with a view to any ulterior use, as is the case with the magazines of starch, &c., which are intended to perform important functions at some future and often distant period. Other matters, however, may be present in the soil or atmosphere which are never requisite for health in any proportion, and which in themselves may be destructive. Different as vegetables are from animals in a multitude of respects, there are species which so closely resemble each other, that it is difficult to say to which great division of the organized world they really belong. Both these exhibit vital phenomena, and we may presume, therefore, that the principle of life, however it may be modified, is essentially the same in each. If proof, however, were wanting in other respects, the identity of the effects produced by many vegetable and mineral poisons upon plants and animals would alone be sufficient. Whether we take the principal organic poisons, as opium, hydrocyanic acid, chloroform, &c., or inorganic, as arsenic, hydrochloric acid, iodine, &c., we find that the effect produced is essentially the same, in some cases affecting the functions, in some the organic structure. Opium, hydrocyanic acid, chloroform, &c., paralyze or suspend the functions of vegetables, precisely as they do those of animals without injuring the delicate tissues; while arsenic, lead, &c., more or less impair their structure. Nor is gaseous matter indifferent; the comparative barrenness of fens, at least as regards the majority of the natural order of plants, depends, in all probability, on the condition of sulphuretted hydrogen; the impure carburetted hydrogen of gasworks is notoriously injurious to trees, as is also the emanation from certain chemical works, which reduce their immediate neighborhood to a treeless wilderness. The mischief may, in many cases, be purely functional at first, but the suspension of functions, especially if long continued or often repeated, except where it is of the nature of sleep, is apt to induce active disease, or the destruction of particular organs, which may in the end prove generally fatal.

It is, however, curious what concentrated poison some vegetables are able to endure. Moulds flourish in arsenical and other mineral solutions, which might have been supposed utterly incapable of sustaining any vegetable. One species is the source of great annoyance in electrotyping, as in the Map Office of the United States of Washington. The sulphate of copper is deprived of its copper by the mould, which assimilates the sulphuric acid while the copper is deposited as a thin, metallic pellicle on its walls. A fungus again flourishes in the water of tan-pits where no phænogam could exist.

Though the action of many poisons upon plants, as opium, prussic acid, chloroform, &c., may be considered by the cultivator as mere matters of curiosity, which can never call for any especial treatment at his hands, it is most important that he should attend to the principle involved in them, for, if so, he will not over-manure his plants or trees. However beneficial the substance may be when properly administered, he will not use coarse, putrid manure as is the fashion with some, of treating vines, the most delicate, perhaps, of fruits, and the most easily impaired by injudicious treatment, nor will he be indifferent to the quality of air with which his houses are supplied. Ventilation will be of little use if poisonous vapors are constantly rising from beneath, and these are sometimes so intense as to produce at once visible evil.

It is very doubtful whether plants are capable of rendering ground noxious by excretion from their sound and entire roots. It is, however, easy to conceive that such plants as poppies, if ploughed green into the ground in considerable quantities, might prove injurious. —M. J. B., *in Gardeners' Chronicle.*

The following article is taken from a French paper:—

"Few people form an exact idea of the importance attained by many branches of our rural industry, such, for example, as the product of eggs. France sends every year to England about 7,780,000 kilogrammes of eggs, say 717,160,000 eggs, at a calculation of twenty-two for the kilogramme. Reckoning that a hen lays 100 eggs in a year, which is a fair average, it will be seen that this exportion is the produce of 1,711,600 hens. Our importations from other countries are only about 66,000 kilogrammes, and about the eighth of those sent to England are supplied by Belgium, and the Sardinian States. As for the consumption in Paris, it is not less than five or six millions of kilogrammes—that is to say, from 110 to 132 millions of eggs."

It will not be said there is not a demand, when it is proved that so many millions are consumed over and above what the country can produce. Our own poultry-keepers have a great advantage over foreigners. They have no freight, duty, nor expensive packing. Their market is always close at hand. A still greater advantage is, that the expense incurred by the foreign exporter, in collecting from Belgium and Sardinia, is just so much encouragement to ourselves.

The first idea that strikes us is, that, in many large farm-yards, many more fowls might be kept, without causing extra expense. Let us admit that the occupier is not a poultry fancier. A hen lays 100 eggs, and they are worth at least five shillings; a hundred hens will then pay, in eggs, twenty-five pounds. But, with care in selecting the breed and the birds, they may be made to produce more. We say nothing of food, because the fowls bred at a farm will more than pay any expense. Near a large town, where there is a demand for new-laid eggs in the winter, and at the commencement of the spring, they will realize much more than we have stated above.

We will say nothing of the other mode of making poultry profitable, as we have so lately treated of it. We desire only to call attention to the fact, that a great demand exists, that all the advantage is on the side of the home producer, while his inattention to it throws it into the hands of others who are more careful to look at small matters.—*Cottage Gardener.*

The Exeter Nurseries.—The city of Exeter is in the West of England, and is about 200 miles on the Great Western Railway. We very recently visited the two Exeter nurseries; that of James Veitch and Son was the first to which our attention was directed. This is one of the largest and best kept nurseries in the kingdom, in which will be found full collections of all the principal classes of plants in cultivation. Here you find growing luxuriantly such plants as Piptanthus nepalensis, Eleagnuses, Pittosporums, and a number

of shrubs and plants that are treated as greenhouse plants in the more rigid north. Devonshire is indeed a favored locality, and a number of shrubs and plants live out during the winter, that, with us, and especially further north, require considerable shelter, and in some cases, greenhouse protection. In the open ground are to be seen growing freely, large patches of the rarer sorts of Arbutus, Hollies, Photinias, and many of that better class of shrubs too seldom seen and cultivated; and a large collection of Conifers are grown here, and we noticed a very beautiful specimen of Araucaria imbricata, with the same regular symmetrical form as the famed Dropmore specimen. How such an exquisite tree must tempt many to become a purchaser of one or more of this noble plant! Many fine specimens of Conifers are to be seen, and our attention was attracted by two varieties of Cupressus Lambertiana, one throwing its shoots in a horizontal direction, and the other maintaining an erect and close growth. Both varieties are handsome, and appear to be equally hardy. A small plant of Picea amabilis, which promises to be a noble companion for Picea Nordmanniana and Nobilis; and small plants of Picea grandis and Bracteata, both of which give promise of great beauty, are also planted out. These three species will prove valuable additions.

Close by the nursery is the private residence of Mr. Veitch, in the garden belonging to which are some new species of Conifers. In a sheltered nook, close by the dwelling-house, the beautiful Eugenia ugni had ripened its fruit, which is of the size of a large black currant. It is our impression that the Eugenia ugni is destined to become an important plant, and that it will be much valued and cultivated for its fruit, for *when perfectly ripe*, the flavor bears a close resemblance to a good pine-apple; in fact, it is a rich aromatic and indescribable flavor, being something between that of a good pine and the Hautbois strawberry, and even in gathering this rich odor is left on the fingers. In the Camellia house is a large plant of the Lapageria rosea trained over a portion of the house, and had then several of its rich scarlet blossoms fully expanded. It is a most valuable and beautiful climber, and seems to do best in a soil composed chiefly of peat and fibrous matter. This plant is not sufficiently known yet, for on its first introduction many were puzzled as to the treatment it should have, and in some instances it was treated as a hothouse plant, and in others as a greenhouse plant. A cool and shaded situation seems to suit it best, and when planted out in a border in a Camellia house, or in a cool and shady conservatory, it will no doubt do well. In the same house Fuchsia pendulina was in full bloom, and the Camellias were in most luxuriant health, and covered with a profusion of plump buds, such as are not often seen. Geraniums are grown very well here, a house being devoted entirely to specimens. We noticed at the outside end of one of the houses a large plant of Fuchsia Dominiana, that had been flowering freely, and was now cased for the winter. This is really a valuable winter blooming conservatory plant, but somehow or other it is sadly mismanaged at times. It should be grown freely early in summer, and then checked, and its wood ripened early in autumn, so as to induce freedom of blooming in winter. Two or three houses, devoted expressly to new and rare plants, many of which are not yet proved, are of the greatest interest, as well as one or two private gardens, in which new shrubs, herbaceous plants, &c., are planted for proving. In one of these, we noticed the true Embothrium coccineum, which has a broad leaf, and was well set with flower buds, and is quite hardy. We have, however, seen another species with a narrow leaf, under the same name, but the latter seems to be Embothrium salicifolium, and is not hardy. We also noticed a new hardy herbaceous plant named Phygelium capense, which of course was not in bloom at that late season of the year, but we were told it was a welcome addition to this very useful class of plants, as was a new scarlet hardy Delphinium cardinale, the entire stock of which is in the hands of Veitch and Son. Will not this plant indeed be a valuable acquisition? The beautiful little Leptodactylom Californicum was blooming freely, and

seems to require the same treatment as Roallia ciliata, and is a delightful winter blooming plant. In the Orchid house the charming little Sonerila margaritacea, with its spotted foliage and pale pink flowers with bright yellow stamens, was blooming freely, and the various species of Anæctochilus were growing freely in a much drier atmosphere, and with less nursing than we generally see adopted, and which seems to be quite unnecessary. In this house was the beautiful Ouvirandra fenestralis, or lattice plant, immersed in tepid water, and growing luxuriantly. What an interesting plant this is! the leaf being so totally different to that of other plants.

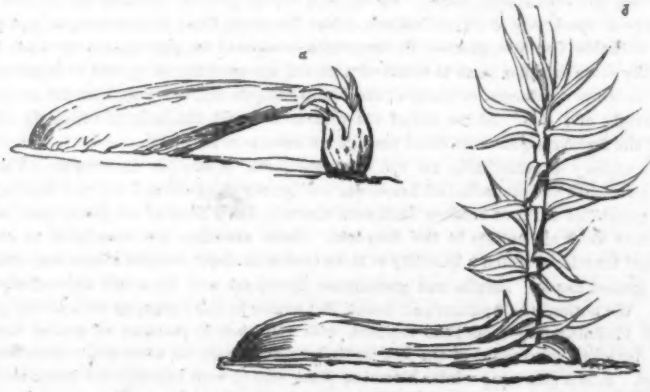
Close to the principal entrance of Lucombe, Pince and Co.'s home nursery, is the original Lucombe Oak, now a noble tree, the trunk of which is several feet in circumference. At the entrance to the show house are two superb pyramidal Irish Yews in tubs, and in the show house, 120 feet in length by 18 feet in width, was a display of flowers such as we seldom meet with at this dormant season of the year. Several fine plants of Fuchsia Dominiana were in full bloom, as well as Primulas, Chrysanthemums, and other blooming plants. Several plants of the Pampas Grass in bloom were grouped among other things, and produced a very pleasing effect. Close by is the Camellia house, a noble structure, 240 feet in length by 24 feet in width, and filled with splendid specimens of Camellias loaded with buds. Passing through the Camellia house we enter upon the Rockery, situated in a circle, the diameter of which is about 150 feet, and inclosed by a thick laurel hedge, several feet in height. Here is to be found a piece of rockwork, arranged with truly artistic skill. What once was an ordinary basin for a fountain, has, by the skilful arrangement of large blocks of stone, been converted into rocks and caverns, between which a stream of water passes gently on. A natural ruggedness is thrown over the whole, and various plants suitable to the locality are charmingly interspersed. It would shame half of our landscape gardeners of the present day. At one side of the rockwork is a splendid specimen of the majestic Pampas Grass, about ten feet in height, and possessing twelve fine spikes of silvery feathers glistening in the sunshine. What a noble ornamental hardy plant for a lawn, with its handsome drooping foliage! Here, too, is a noble specimen of Pinus insignis full 40 feet through, and about 50 feet in height, a fine specimen of Pinus Sinclairi, 8 feet high; Pinus macrocarpa, 15 feet high, and a beautiful specimen of Biota japonica, 8 feet high. On the rockwork are Desfontania spinosa, Skimmia japonica, and other new and ornamental plants. By the side of a long walk, reaching nearly half a mile, are superb specimens of Pinus insignis, Abies Douglasi, Picea Nordmanniana, and various other valuable Conifers, planted in large tubs composed of stout pieces of wood, banded tolerably close together so as to admit of a partial egress of the roots, and to insure the safe removal of the specimens, as many of the Pinus insignis and other conifers are of considerable height and size. At the end of the walk is a small Pinetum, in which we observed one of the finest specimens of Picea pinsapo we have ever met with.

This nursery is remarkable for the immense stock of conifers it contains. There are large quantities of Araucarias, all handsome well grown plants from 2 to 6 or 7 feet in height, large quantities of Pinus cembra, Juniperus sinensis, Irish Yews of all sizes; and, in short, the finest stock of conifers in the kingdom. Great attention has been paid to standard Portugal laurels, of which a quantity is to be seen with clean straight stems, and symmetrically trained heads. Heaths and greenhouse plants are well done and extensively grown here. We noticed the fragrant and beautiful Luculia in full bloom, as well as the graceful winter blooming Thyrsacanthus rutilans, with its pendent racemes of scarlet blossoms. Here also was a good plant of the Bouvardia longiflora, with its clear white Jasminum like flowers. It is a charming winter blooming plant, and is very valuable for bouquets; there is a fine collection of Orchids here, several of which were in bloom.—*London Florist.*

EDITORS TABLE.

Evils of Deep Sowing.—In many seeds, the vital principle is so strong, that to scatter them upon the soil is sufficient to insure their speedy germination; but in others, the power of growth will only manifest itself under more favorable conditions. Moisture is necessary, but not an unlimited quantity; if a seed is thrown into water, and exposed to a proper temperature, the act of germination will take place; but, unless the plant is an aquatic, it will speedily perish; no doubt, because its powers of respiration are impeded, and it is unable to decompose the water it absorbs, which collects in its cavities, and becomes putrid. There must, therefore, be some amount of water, which, to the dormant as well as the vegetating plant, is naturally more suitable than any other; and experience shows that quantity to be just so much as the particles of earth can retain around and among them by the mere force of attraction. To this is to be ascribed the advantage derived from those mixtures of peat, loam, and sand, which gardeners prefer for their seedlings; the peat and sand, together, keep asunder the particles of loam which would otherwise adhere, and prevent the percolation of water; the loam retains moisture with force enough to prevent its passing off too quickly through the wide interstices of loam and peat.

Under what depth of earth seed should be buried, must always be judged by experience; but it should be obvious that minute seed, whose powers of growth must be feeble in proportion to their size, will bear only a very slight covering, while those of a larger size, and more vigor, will be capable, when their vital powers are put in action, of upheaving considerable weights of soil. As the extent of this power is usually uncertain, the judicious gardener will take care to employ for a covering no more earth than is really necessary to preserve around his seeds the requisite degree of darkness and moisture. An erroneous opinion prevails that seeds must be "well" buried, in order that the young plants may have "sufficient hold of the ground." But a seed, when it begins to grow, plunges its roots downwards, and throws its stem upwards from a common point, which is the seed itself; and, consequently, all the space that intervenes between the surface of the soil and the seed, is occupied by the base of the stem, and not by the roots. The seeds of the Araucaria illus-



Germination of Araucaria imbricata; *a*, the seed after it has inserted its radicle in the soil, the stem and leaves just appearing; *b*, the same seed, at a later period, firmly fixed in the ground by its roots.

trate this, as remarked by Professor Lindley; they always grow best when merely laid on the surface of the soil with a little earth raised round their edges.

The finest oaks spring from acorns dropped in the forest, and covered by a few leaves. The sycamore, the ash, the beech, the horse-chestnut, &c., will all sow themselves wherever their seeds can stick to the ground, until a coverlet of leaves is moistened by an April shower, and warmed by an April sun. Neither have such seeds any difficulty in steadying themselves by their roots; a fang is driven by a vital impulse into the earth, and it is to that, and not to the buried neck of the stem, that the seedling trusts for support and nourishment.

It is not a little remarkable, that not only do seeds germinate unwillingly if buried too deep, but that, although they may grow, they cannot, even if forest-trees, develop with vigor for many years. Atmospheric air, which is indispensable to germination, is too much excluded; the injury is not from the superincumbent pressure of the soil.

Thouin, in his *Cours d'Agriculture*, remarks, that small seeds should be covered only a line deep, with earth spread very loosely; seeds, of the size of peas and beans, about three-quarters of an inch deep, and the bulky seeds of our fruit-trees, such as the apricot, nuts, peaches, almonds, with from two to three inches of soil.

"*The Flower Garden*, or Breck's Book of Flowers," is the title of a large duodecimo, published by J. P. Jewett & Co., of Boston, and a very good hand-book it is, being a revised edition of the one published in 1851. It contains a chapter on the cultivation of plants in the parlor, which we recommend to the ladies.

Gardening for the South.—Mr. William N. White, of Athens, Georgia, one of the esteemed correspondents of the *Horticulturist*, has written, and C. M. Saxton & Co., of New York, have published, a very clever book with the above title, which we desire to make fully known in the large section of country for which it is designed. It is an able manual, with directions for a practitioner in the kitchen and fruit garden, together with hints upon landscape and flower gardening. Mr. White is a practical man, and his book is evidence that he knows what he inculcates; if it is well studied and followed, it will prove a blessing to a land where some climatic influences should be counteracted which render the northern books unsuited to the wants of the learner. We hope to see many editions of this work, because it fully deserves a large popularity.

Michigan Agricultural Society.—"A little farm well tilled, a little house well filled, and a little wife well *willed*, are three most desirable objects," says Mr. J. S. Tibbits, in the *Transactions* of the Michigan Agricultural Society, a large octavo volume for 1854, which has been kindly sent to our table by J. C. Holmes, Esq., its industrious and intelligent secretary. Like the Illinois *Transactions*, already noticed, the work is full of intelligible facts, and is a highly important contribution to the agricultural literature of the country; we pronounce it a big book well *distilled*.

It embraces the Annual Report of the State Society, and takes up in detail the proceedings of the subsidiary county societies, reports of the great fair, and of the county fairs, statistics of farming, addresses delivered in various places, and incidentally strong arguments in favor of a State Agricultural School, that cannot be gainsaid. Lands in abundance belonging to the State are at its disposal, and we do not see how its legislators can help themselves from prosecuting so truly valuable a scheme; a scheme which is, or must be adopted and patronized by every progressive State.

One of the reports alludes in strong language to the exhaustive process of perpetual cropping; this sad but common error the farmers are becoming aware of, but do they realize that the system of impoverishing our lands, without sustaining their natural strength and fertility, will, sooner or later, end in barrenness? and that if the present population may rightfully exhaust one-third part of the arable lands of the United States of their natural fertility, the population which will be here at the close of the present century will, long before that period, have consumed the remaining two-thirds of all American territory? By a calculation which has appeared in a late report of the Patent Office at Washington, it is estimated that *one thousand millions of dollars* would not more than restore to their original richness and strength the *one hundred millions of acres of lands* in the United States, which have been already exhausted of their fertility! As a nation of farmers, is it not time that we inquire by what *means*, and on what terms, the fruitfulness of the earth and its invaluable products may be forever maintained, if not forever improved.

Agricultural schools would furnish all classes an opportunity to acquire a definite knowledge of all the known principles by which agricultural pursuits should be conducted. We

have a more perfect state of civil and religious liberty than Europeans. Even the most free of those nations have a State religion to support, and therefore have no religious liberty; we have no great distinctions of caste which prevail abroad; we are comparatively free from taxes, and can therefore be more liberal to schools; the cultivators of the soil here are usually the owners of it, while the laborers in Europe have little concern in the matter, and take but little interest in getting up schools; nay, they are ignorant enough to oppose them, lest they should so improve agriculture as to diminish their wages. But there is no need to pursue the arguments so well enforced by this volume.

The advantages of railroads to an interior, are forcibly argued by several of the contributors, one of whom, alluding to the old wagon mode, which obliged the farmer to take his produce himself to market, adds: "He thus risked the temptation to appropriate a part of the proceeds for liquid returns which frequently floated off a goodly portion of the proceeds of the harvest, as, possibly, some of you have had occasion to know." In other words, the iron transporter don't drink whiskey! an advantage we had never thought of before. It was soon found, too, in regard to live stock, that a steer worth $60 or $70 at the Bull's Head in New York, cost no more for carriage from the oak openings of Michigan, or the prairies of Illinois or Indiana, than one worth but $35 or $40, and shrewd dealers discovered that they could afford to pay a better price for good animals of improved breeds than they could for inferior. So it is that farmers opposed to progress have been obliged to move off, and leave the field to the improvers, and a race of thoughtful, active men is usurping the old fogies. To be a successful farmer now, one must learn things that were never taught or even dreamed of by the plain, straight-forward, strong-handed men, who had hewn their way to a home, axe in hand, and who were still contented with the work of the old-fashioned wooden plough, and the equally antique triangular harrow. Progress has become a necessity, which these western *Transactions* chronicle and promote.

In 1835, there was but one periodical in the Union devoted solely to the interests of agriculture; now they are almost as numerous as the States themselves. The example of the New York State Agricultural Society has aroused the minds of the farmers to their true interests; State after State came into the ranks; communities and counties marshalled their companies of independent yeomanry and wheeled into line; now, all are actively engaged in battling the common enemy—the allied legions of ignorance and error. Twenty years ago there was no opportunity of learning what is now learned each year from the published reports of societies, in relation to the improvements being made in the methods of tilling the soil; or of examining new implements, or of comparing the merits of the various breeds of foreign and domestic animals, or inspecting the grains, fruits, and vegetables of the best known descriptions. Whoever has attended a State Fair, with his mind awake, and his eyes open, will never despair of the Republic; whoever reads these *Transactions* attentively will rise, from their perusal, a wiser and a better man.

Gossip.—The name of *Larkspur* has been given, in consequence of the horn-shaped nectary of the flower, being in form like the spur of a lark's foot. There are many beautiful varieties now cultivated.—Some idea may be formed of the prodigiously increased drain upon the functions of a plant, arising from an increase of dryness in the air, from the following consideration: If we suppose the amount of its perspiration, in a given time, to be 57 grains, the temperature of the air being 75°, and the dew-point 70°, or the saturation of the air being 849°, the amount would be increased to 120 grains in the same time, if the dew-point were to remain stationary, and the temperature were to rise to 80°; or, in other words, if the saturation of the air were to fall to 726°. Besides this power of transpiration, the leaves of vegetables exercise also an absorbent function, which must be no less disarranged by any deficiency of moisture. Some plants derive the greatest portion of their nutriment from the vaporous atmosphere, and all are more or less dependent upon the same source. The *Nepenthes distillatoria* lays up a store of water in the cup formed at the end of its leaves, which is probably secreted from the air, and applied to the exigencies of the plant when exposed to drought; and the quantity which is known to vary in the hothouse is, no doubt, connected with the state of moisture of the atmosphere.—Double glass sashes are recommended by some writers. The lights of many frames not in use, in winter, might be fitted to slide over the hothouse during the severe season; and, in the spring, their places might be supplied by night mats, or canvas.—The Tamarisk, a very beautiful plant, not much known in America, should be planted in the shrubbery, to mix with broad and fixed foliage, as the laurel or holly. It is also calculated to cover the sides of hills, where it is desirable not to take off the view by taller trees; in marine gardens, it soon acquires sufficient height to protect rose-bushes, and other low flowering shrubs. The Tamarisk is deciduous, although, when in

foliage, it has all the character and appearance of an evergreen shrub.—The Whitlavia grandiflora, among new hardy annuals of recent introduction, ranks with the prettiest. It is a native of California, and grows from nine to eighteen inches high, branching freely, and blooming profusely, if not in a very rich soil. The flowers are bell-shaped, of the richest gentian-like blue color, with a tinge of rose inside. Each blossom is an inch long, and an inch and a half across the mouth.—The Lily of the Valley does not grow well in very rich or very dry soil.—UNIVERSAL COMPOST. Turf cut from an old loamy pasture, such as is used to lay down for lawns, about three inches thick, and laid in a heap to rot, is invaluable. This rubbed through a sieve that would let a hazel-nut through, two barrowfuls; *peat earth*, full of fibre of a spongy, light nature, used for heaths, half a barrowful; and *cowdung* rotted into mould, half a barrowful, with a sprinkling of *white sand*, and small pieces of *charcoal*, well mixed together, form a compost for almost everything.—To kill rats and mice, cut cork into thin slices, and fry them in fat, butter, or meat gravy; the animals are very fond of them, but cannot digest them. They are equally destructive of cats and dogs.—Observations which have extended over many years, prove that with the seasons the solar powers are, relatively to each other, subject to an interesting change. In the spring, the *actinic* power prevails, and during this period its agency is required for the development of the germ. As the summer comes on, the actinic rays diminish, and those of light increase. We see the necessity for this, since luminous power is required for the secretion of carbon, with which the woody fibre is formed, and also the approximate principles of the plant. Autumn, the season of fruit, is characterized by the increase of the heat rays, and a diminution of the others; this change being necessary, as science now teaches us, for the production of flowers and fruit.—There are now cultivated, pink and red fuchsias, with white corollas, and a scarlet sepal, and snow-white corolla.—A garden can be kept in constant bloom by cultivating larkspurs, lupins, coreopsis, sweet peas, nemophila, mignonette, convolvulas minor, and such like plants, in small pots, very few seeds in a pot, and lightly covered; give plenty of water. These, with care, will grow strong and healthy, and may be used to fill up the places vacated by others that decay. The removal of a plant, and filling its place with one in good order, is only the work of a minute.—The *London Gardeners' Chronicle* of April 12, *first* inserted a brief notice of the Lawton Blackberry. Dr. Lindley might safely read one or two American periodicals.—Another English paper, devoted to horticulture, says: "A correspondent asks whether any attempts have been made to cultivate and improve the common blackberry, and he wishes to know whether any of our readers can "show any just cause or impediment" why a fruit should not be produced as much superior to the present as a Ribstone pippin is to the original crab."—Italian rye-grass is much cultivated now in England, and the price of the seed has nearly doubled, so that orders can scarcely be supplied.—Great frauds in the seed trade have excited much remark in the London papers. By means of steam, sulphur, and old age, all sorts of rubbish are made to pass for articles of sterling value; dead rape does duty for turnip-seed, and so on. London is getting a very bad character for adulterations.—On the wall of a conservatory camellias may be trained, say varieties such as colvillei and imbricata, both of which flower at one time, and their blossoms being of different colors, contrast admirably with one another. Camellias managed in this way make charming coverings for walls, and where a border for planting them in does not exist, boxes either of slate or wood answer the same purpose. If made of the former material, they are of course more durable than if wood is employed.—William Minards, of Palperro, says the *Cornwall Gazette*, has in his possession a cat that is very expert in catching trout and eels. When the water is low in the river that runs down the valley, near the outlet of which is built the little town of Palperro, the cat watches on the margin of the river, and, when any of the finny tribe approaches within her reach, she lays aside the natural dislike that is common to the feline race, that of wetting their feet, and instantly darts her paws into the water, and fixes her talons in her prey, brings it from its natural element, and carries it in triumph to her master's house. This feat she will repeat several times a day.—A Scotch newspaper declares that the following rather remarkable circumstance is worthy the consideration of poultry breeders. A duck, rather under the ordinary size, belonging to Mr. Hay, of Laggan, has this season deposited an egg every day for one hundred and forty-three days in succession. The little useful animal was hatched from the egg of a wild duck, and laid an enormous number of eggs last year. Might it not add to the profits of the poultry-yard if similar experiments in breeding were oftener tried?—Orchard-houses for peaches, &c. &c., are now the rage abroad, and are even penetrating into the far north of Scotland.—Picea Nordmanniana succeeds perfectly, grafted on the Silver Fir.—"The Blood Manure Company" is introducing a valuable manure, made from the blood of animals. It is highly recommended for wheat, barley, oats, &c. This substance is lost in America, but steps should

be taken to use it.—Among the score of plants which show the effects of the different modes of *Grafting*, the most useful to know is, that all the rare *Pinuses*, or, rather, the whole race of *Conifers*, should be grafted down as low as the collar of the plant which is used for a stock; then, by planting such grafted plants sufficiently deep to bury the grafted part, roots will come from the scion, or graft, in time, so that the plant, ultimately grows on its own roots. This is really a useful lesson.—Perhaps the most interesting object which has lately flowered abroad is a new Camellia from China, discovered and sent home by Mr. Fortune. It is a carnation striped kind, very different, however, from any we have hitherto possessed, inasmuch as the stripes, rosy pink, are much more brilliant than in any variety we now have of this class, and the general outline and form of the flowers are all that the most fastidious in such matters could desire. This, therefore, must be regarded as an acquisition of no mean importance. It may be mentioned that the plant which has flowered, was half-starved, and nearly destitute of foliage; therefore the blooms, handsome as they are, may be expected to be much more so when produced by healthy specimens.—There is, perhaps, more injury done in a mild winter than in a severe one, amongst the tender or half-hardy plants which the gardener has to deal with; for it not unfrequently happens, that a period of dull, mild weather, throws the inexperienced off their guard, and towards the middle, or it may be earlier, a sharp frost sets in suddenly, carrying death and destruction to many things which had looked not only healthy but luxuriant. A mild winter is seldom followed by a genial spring; the consequence is, that plants which have survived, perhaps, in the open air, are often killed.—Hartweg declared, that a woods of Pinus Benthamiana was the finest thing he saw in his extensive travels. It is now much planted on the hills of Scotland.—*Thuja gigantea* is one of the most singular trees; it is not unlike *Sequoia gigantea*, only it has not so much of a cypress look. Like the *Sequoia*, it is a Californian tree, of great size and beauty, attaining the height of one hundred and eighty feet, the lower eighty feet of which is as bare as a May-pole; but, with us, we shall not see it thus in our day.—Another remarkable Conifer, from Asia Minor, is *Thuiopsis borealis*, a fine, graceful-looking tree, and said to be very hardy. The Wardian Case has brought over a large batch of seedlings of *Araucaria Cookii* to the other side of the world, and there they are as if they were sown on the spot.—In Holland, no table is without cooked Endive, and almost no day in the year. It is the most universally popular dish in the country, and the most savory morsel. But the method of preparing it is somewhat different from that given by you. Take two good Endives, not blanched, separate the leaves, and boil them in two waters (to extract the bitter). If still bitter, use a third water, but ten minutes before they are ready, throw in a handful of Sorrel leaves. When ready, take them out and strain them, and put them back in the saucepan with a piece of butter, the size of a walnut, pepper and salt, q. s., and a tablespoonful of any rich gravy. Shake them well over the fire till all is incorporated, and send them in hot. On no account chop the leaves. *Iota.*—The appropriate name of one of the exhibitors of the London Horticultural Society, is *Cutbush.*—The *Southern Cultivator* says: "We believe, from all the lights before us, that *more wine*, and of *better quality*, can be made on a given quantity of land in the South, than in Europe or at the West, and that the *Catawba* is by far our most promising grape for the purpose. We must not, however, be confined entirely to this variety, as the *Warren*, and, perhaps, the *Isabella* may be found to produce wines which cannot be made from the former."—Robert Nelson, in the same periodical, pronounces a new seedling peach, of Georgia origin, and called the Pocahonta, the finest he has ever eaten.—Tansy, planted round the peach-tree, is obtaining favor as a remedy against the borer.—A good oil can be produced from the seeds of cotton, but they are too valuable for manure to be extensively employed in this manner.

Colombian Guano.—The Philadelphia Guano Company have introduced, this spring, the Colombian guano from the Venezuelan islands in the Caribbean Sea, and, from the analysis of the article, it is pronounced the best fertilizer of the kind yet discovered. The best contains *eighty* per cent. of phosphate of lime. Professors Stewart and Booth have analyzed various specimens, and give certificates of the above fact. It is estimated that the islands referred to contain an amount exceeding five millions of tons; some of the deposits contain a very large percentage of ammonia, while in that of others the superphosphate of lime predominates, with but a small amount of ammonia. One analysis of Professor Booth gives 78 per cent. of superphosphate of lime, which is nearly fifty per cent. greater than that obtained from bone dust.

A long lease of the islands, including the famous Bird Island, has been obtained by the Philadelphia Company. Their guano has been tested by farmers in Maryland to a considerable extent; Dr. Stewart, chemist of the Maryland State Agricultural Society, says:

"Highly as I appreciate the Mexican guano, still I do not hesitate to say that I would rather have four tons of Colombian than ten tons of Mexican, and I would rather have equal portions of Colombian and Peruvian applied to any wheat than Peruvian alone, *or any other superphosphate alone.*"

The price is for 1 to 5 tons cash for 2,000 lbs. $40
" " " 51 to 100 " " " " " 35

The agents in this city are Richards & Miller, 92 South Front Street, of whom large or small quantities may now be procured. We recommend its trial by farmers and horticulturists. For the Pear-tree it will be invaluable.

Flora of the Colosseum at Rome, is the title of a London volume, by Dr. Richard Deakin. The author says that 420 species of plants are found growing upon the Colosseum, including 253 genera, and illustrations of 66 of the natural order of plants. There are 59 species of grasses, 47 of the syngenesious plants, and 41 of the pea tribe. This is in an inclosed space of six acres of ground, a limit that does not include the walls and ruins. This space includes a great variety of soil and temperature. The lower north side is damp, while the upper walls and accumulated mould are warm and dry; and the south side is still hotter, and more Italian. Strange mutation that one of the most innocent and poetical of the sciences should now choose the Colosseum for its favorite haunt, where the swarth Egyptian, the agile Moor, and the crisped-haired Nubian, struggled and died amid the shouts of Romans, uproarious in their holidays, the more delighted, the more savage the scene!

Beurré Capiaumout Pear.—A correspondent writes: "I have been much edified, nay, instructed, by Dr. Ward's chapters on Pears. I believe the Duchess d'Angouleme bears more abundantly, in a young state, on the quince than any other kind, except, perhaps, Beurré de Capiaumout, which, wherever I have met with it, shows its decided preference for the quince, by uniformly producing large crops of very handsome and good fruit on it."

Travel and Health.—*The Virginia Springs.*—If one of the great pleasures of travel is novelty, and observing changes in modes of life and modes of thought, the Southerner should undoubtedly come Northwards, and the Northerner visit the South. The change affects the observer as much as a trip from London to Brussels. We speak the same language, but our usages are vastly different. A residence of a few weeks at the various springs of Virginia, offers inducements to the healthy of this kind, with a cool atmosphere, and a mixing with polite and agreeable people, whose thoughts, however, run in a refreshingly new channel, that leaves out much that we glory in—such as love of stock securities, and a never-ceasing talk of money. The railroad from Alexandria will carry you, this season, to the very doors of the Rockbridge Alum Springs, now all the fashion, where a good table, and a gentleman to administer to your society as well as comforts, give attractions of superior order. Then these Alum Waters do really cure some of the worst ailments of our fragile race.

A short ride by good stages conveys you to the Warm Springs—a bath in whose waters you will never forget, and a seat at whose table is a treat, even to the boarder at the Girard House. A little further are the Red Sweet, the Sweet, the Healing, the Hot Springs, and, further on, the Salt—a capital place, and, near by, *the* fashionable White Sulphur, where stages by the dozen arrive full of people who know perfectly well they must sleep on the floor; but fashion is omnipotent, and you must be seen there if you want to get a partner for life, or expect to be able to converse for the ensuing winter. A day's ride then brings you to the Red Sulphur, famous for curing consumption.

For our own comfort, we should be perfectly satisfied with the Rockbridge Alum, and could settle down there, for the season, on its venison and hot bread, making excursions to the Natural Bridge and the Peaks of Otter, without any regrets for tide-water or lobsters. There is here a daily mail, and a well-managed post-office. People who have never tried this summer atmosphere, have no proper notion of cool America in hot weather.

Answers to Correspondents.—(H. M., Burlington, N. J.) Set your Azaleas for the summer in a cool, shady place.

Grapes, of the Isabella kind, may be kept till March, by packing them in boxes with alternate layers of ash-wood sawdust, and keeping them from frost. The boxes may be set one on the other, without any other covering. The sawdust of the ash imparts no flavor to the fruit.

(B. W. A., Boston.) The Kew palm house is 362 feet long by 100 feet wide in the centre, and 66 feet high. It is glazed with sheet glass, slightly tinged with green, the tint being

given by oxide of copper. This is to counteract the injurious effects on vegetation, arising from the use of white sheet glass. There are 28,000 superficial feet of hot water pipes. A high tower, at the distance of 550 feet, conveys the smoke; to this, flues lead under ground. The coal is brought in on a subterranean railway. In ventilation, and other matters, the building is equally perfect. Would that *we* had legislators alive to the importance of instructing the people in such matters, but they are all engaged in *horrible politics*.

Hen Manure, again.—(H. D., Waterville, N. Y.) This is a powerful manure, equal in its effects to guano, or nearly so. Its "actual value" will depend in a great measure on the facility or otherwise of procuring different manures, and the nature of the soil to which it is to be applied. As a general reply to your inquiry, we might say it would be worth about fifty cents per bushel to you, and would be advantageously used wherever guano has been found beneficial. In preparing it for use, mix an equal portion of dry soil and some charcoal with it, and pulverize as much as possible.

Peach Borer.—An Indiana correspondent writes: "A good plan to preserve peach-trees from the grub, is first to wire* them, then throw fine sand round the stem, three or four inches high; it preserves them from the grub, and they grow very fast. One of your subscribers takes this plan, and has no further trouble."

Mathews' Curculio Remedy.—(P. B. W., Picton, C. W.) "What has become of Mathews' curculio remedy? Why don't the committee report?" Can't guess—probably because it is a *secret remedy*.

(Hyacinth Bulbs.) "Will Hyacinth and other Dutch bulbs run out in this country?" Not if they are treated to the same care the Dutch florists bestow on them. To prevent their deterioration—indeed, to see them at all in perfection, they require to be grown in the open air, in sandy alluvial soil, well enriched with well decayed manure—cow-dung being found most advantageous. Forcing, or growing them in rooms or windows, weakens them to such a degree as to render them almost worthless for a second season.

Angers Quince Cuttings.—(H. S., Harrisburg, Ind.) You will only succeed with these by taking them off early in the fall—in your latitude before the 1st of October—and planting at once in rich, moist soil.

Belts for Screens.—What are the directions for planting a belt of evergreens to screen one from his neighbors? There is in Downing's work, and through the *Horticulturist*, a lack of definite information as to the size and number of trees, and the distance between them. Can you give me a rule for a place of five acres, with a front of between two and three hundred feet? M. P.

No better evergreen screen can be planted, for your purpose, than either the Norway Fir or the American Arbor Vitæ. If the first is employed, it will take considerably more space in your premises than the second, as the Norway Fir spreads its lower branches to a considerable extent; if this is not objectionable, plant them four feet apart, and when they have attained the required height, cut off the leaders annually, bring the whole to a conical shape, and you obtain a superb screen. If space is an object, employ the Arbor Vitæ; plant two and a half feet apart, and keep them well sheared to give a thick habit. If your climate admits, and the plants are to be had, a Juniper hedge, well kept, is extremely ornamental. We say nothing of the holly, because it is probably too slow in its growth, and as yet it is not to be had in quantities, though from the demand for the seeds the past season, it is evident that many are now turning their attention to its cultivation. Our correspondent is mistaken in stating the absence of this kind of information in former volumes of the *Horticulturist*—see, for instance, vol. ii. p. 492. 1848.

Burnt Soil.—(P. B.) When you are burning the brush, trimmings, &c. &c. of your garden, make a semicircular mound with a few stones, and, as the heap begins to burn, pile on it as much of your clay soil as can be, and burn it. During the first day or two, but little care is required to keep the pile on fire; but after this, if the fire is not allowed to break through, and thus expand itself, it will spread through the whole heap, and a large amount of soil may be burnt by still adding to the top. Burnt soil of this description seems to possess even more nourishing properties than manure, and may be applied with great advantage to fruit-trees as well as garden "truck."

Figs.—(S. T. T.) Figs require a poor soil; gravel, lime-rubbish, &c. is better than manure; to have a full crop, shallow, dry subsoils are the best, and the growth requires to be checked if fruit is wanted. Pinch off the new growth as you serve your pears.

* Our correspondent probably alludes to the plan of running a wire into the holes of any that may have already entered, to destroy them.

James W. Gray, of Ball's Pond, Fairfield County, Connecticut, has issued a catalogue of fruit and ornamental trees, vines, shrubs, &c., at very moderate prices, which we recommend his neighbors and friends to consult.

No. 4 of Dr. Ward's remarks on Pear Culture, will appear in July.

Meehan's Seeds.—Mr. T. Meehan, who advertises his seeds of trees and shrubs, has been very successful in disseminating a large quantity of the esteemed varieties, which heretofore have been difficult to procure.

The Seedling Strawberry, noticed in Emile the Elder's pleasant story, we have cultivated for some years, from the stock of "Aunt Charlotte's" single seed. It is of the Alpine family, and all that Emile says of it we can confirm.

New Roses.—James Pentland, of Green Mount Garden, Baltimore, has introduced, this spring, two new roses, for which he claims the following characteristics: "The Beauty of Green Mount is decidedly one of the most distinct and desirable acquisitions; it is a noisette, of rich, brilliant carmine color, very large and double (flowering in large clusters), and a very free bloomer, quite as free as the Hermosa, and of robust habit." "The Woodland Margaret is very large, pure white, and double, free blooming, with a lilac fragrance; blooms freely in the house;" both are now offered for sale for the first time.

United States Agricultural Society.—The journal of the fourth annual meeting of the United States Agricultural Society for 1856, has been edited by the Secretary, W. S. King, and Part I. is published. It forms an important contribution, and we hope will be extensively read. Lieut. Maury's paper on the subject of Observations on Land with Regard to Climatic Influences, is full, as usual, of truth and practical import. This Society is pre-eminently useful, and its proceedings are replete with information. We shall take occasion to allude to them again.

It is a settled matter, that the next exhibition of the United States Agricultural Society will be held in this city, on the 7th of October. The objects of exhibition will be horses and horned cattle, swine and sheep, agricultural implements, cereal and vegetable products, poultry, native fruits, and wines. We anticipate the greatest turn-out ever seen in Amerika.

By the way, we have on our table the speech of the Hon. John Bell, of Tennessee, to the Senate, on the Naval Retiring Board, highly just to Lieut. Maury. At least, it was a *mistake*, which the Legislature should rectify, to pass an unjust sentence on our most scientific officer, one whom it is an honor to the country to honor. This mistake we look upon as no better than a *crime*.

The Vine in France and Madeira.—At a recent meeting of the Paris Agricultural Association, its President, M. Chevreul, reported favorably upon the nature of the vine disease, and the probability of its speedy disappearance. The Society regards the disease as purely climatic; not denoting degeneracy in the plant, but as likely wholly to cease with the cessation of the atmospheric influences. An American vine-grower and proprietor in Madeira thinks differently; he has been under the necessity of ploughing up nearly the whole of his vineyard, and beginning afresh. So great, however, was his apprehension of finding the European vine degenerated and liable to the malady, that he has come to the determination of replanting with American vines, as of newer and more vigorous growth, and trusting to the climate to restore the character of the produce. We may thus receive Catawba wine from Madeira. Cincinnati must look to her laurels.

Albany Agricultural Works, Annual Circular.—This is an important catalogue of Emery Brothers, with portraits and descriptions of a very large collection of farming implements, which, we should suppose, would be good reading to those interested. Such extent and variety of manufactures tell their own tale of progress.

Guano Convention.—There is to be a guano convention at Washington on the 10th of June, to protest against the Peruvian monopolies. The farmers are also determined to endeavor to have an agricultural department of the general government, which surely is just and proper.

THE WEATHER IN LOUISIANA.—A correspondent writes, that while the sugar-cane has been much injured in Louisiana, the orange-trees, which are usually killed with the degree of frost they have experienced, are entirely uninjured.

THE NEW YORK STATE AGRICULTURAL SOCIETIES' premium lists have been issued in a handsome form. The exhibition is to be at Watertown, Sept. 30, and October 1, 2, 3, after the Pomological Convention, at Rochester, on the 24th, making it convenient to attend both.

AGRICULTURAL EXHIBITION IN TENNESSEE.—There will be a "Grand Exhibition and Trial of Agricultural Implements and Machinery, at Nashville, Tenn., on the 4th and 5th of June, under the supervision of the State Agricultural Bureau."

EXPERIMENT WITH CHERRIES.—Some of our readers, it is hoped, will try the following mode of preserving cherries. It is from the last number of the *London Gardeners' Chronicle*, the note at the close being by the editor, Dr. Lindley:—

CHERRIES PRESERVED BY BURIAL.—On Monday last, I employed a man to excavate a portion of an old strawberry-bed, in order to sink a well some three or four feet below the surface. He found several cherries, plump, round, black, fleshy, and still retaining a sweet flavor. How long they may have lain there I know not. Certainly the ground has not been disturbed for four years, the period during which I have been in occupation. I intend trying whether they yet retain the power of germination, and beg to inclose two, which you may, perhaps, think it worth while to submit to a similar test. They appear to belong to the variety termed caroons. *C. A. Johns, Callipers, Herts.* [The specimens sent us quite answered to the above description.]

DOWNING'S MONUMENT.—MR. EDITOR: I was one of the original subscribers to erect a monument to the late Mr. Downing, and can say I never subscribed to anything of the kind with more pleasure. From the character of the committee who had charge of the plan, I have no doubt of its being well executed, but I, for one, should be glad to know the state of the affair, and cannot but hope it is nearly finished. HORTICOLA.

We are pleased to be able to state, that a recent correspondence with the committee on this subject, enables us to inform "Horticola," and the other subscribers, that the monument is in a forward state, and will very soon be erected in the grounds of the Smithsonian Institute, at Washington, with suitable inscriptions. It is intended to express the refinement, and delicate taste and gracefulness of the mind and nature it is to commemorate under the form of a beautiful antique vase, covered with flowers in arabesque relief. We are assured it will be worthy its object.

EARLY PEACHES.—Mr. M. H. Simpson, of Saxonville, says the *Boston Transcript*, of last month, to-day exhibited, at the rooms of the Horticultural Society, a box of the "Early York" Peach. They were grown and ripened in his grape-house, on the principle of the "Simpsonian system of culture," viz: three crops in two years, which can be applied to peaches as well as grapes. The tree from which these peaches were plucked this morning, bore a crop in Messrs. Hovey & Co.'s Nursery, last September. The peaches on exhibition were grown in three and a half months from the time of starting. His grapes grown upon this system, are now fully ripe, and of a superior quality, the vines exhibiting no signs of having been overtasked.

JACKSON APPLE.—Mr. Wilson Dennis, of Appleback (what a capital place to grow apples), Bucks County, Pa., sends us specimens of the Jackson Seedling Apple, with the description, as follows: "Tree a good grower, and bears early; fruit always fair, which will keep till June, and is in season from December till May. Growth of the tree rather upright—young wood, dark brown." This apple is known and esteemed by pomologists—so much so, that Dr. Brincklé had a colored drawing made of it, and has given us liberty to publish it with a description by himself. We can speak very favorably of the taste of these specimens.

THE GARDENING BOOKS, and Books on Agriculture and Science, for sale by J. Q. A. Warren, of Boston, form a large and separate catalogue, embracing all the works on these subjects esteemed in this country.

RHOADS & GRAY, of Lyons, Wayne Co., N. Y., have issued a catalogue of their extensive fruit and ornamental trees, with a "wholesale list," to which they ask attention.

THE LIQUID FERTILIZER.—In 1852, the *Horticulturist* promulgated the mode of using a liquid manure that was highly popular, and we may add, extremely satisfactory.

It consisted in simply dissolving half an ounce of *sulphate of ammonia* in a gallon of water. Weak as the solution seems to be, if plants are watered with it daily they will die, but used once a week, the most beneficial results are observed on roses, strawberries, early peas, fuchsias, dwarf pears, dahlias; in fact, it suits all plants. One pound will make a barrel. The praise then given to sulphate of ammonia, caused it to be much sought for, and many druggists now have it for sale.

John Feast's Catalogue of new and choice plants visits our table, from Baltimore, and contains the usual varieties of the beautiful and useful. We should be glad if Mr. Feast would put pen to paper sometimes, and tell us what is doing in Maryland. Did the Camellias—any of them—pass the last winter *agreeably to themselves*, as it is said in former volumes of this work they *promised* to do. Let us hear about all this, and give us "a *Feast* of fat things."

THE CROPS.—The fruit crop in this neighborhood is highly satisfactory. Pears and cherries never promised better; of peaches, too, we shall probably have an average crop, both in Pennsylvania, New Jersey, and Delaware. At the Northwest, and in Ohio, there is less to hope for. Of the grain crops, the best accounts reach us.

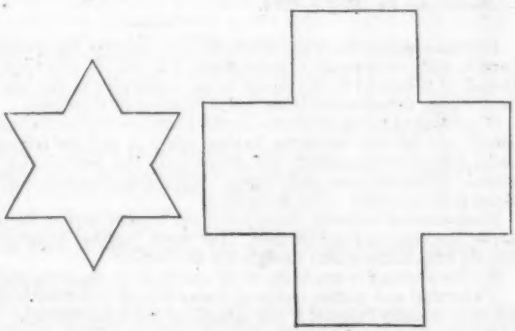
WODENETHE, FISHKILL LANDING, 26th March, '56.

MY DEAR SIR: In looking over, last evening, a back volume of 1837 of the *English Gardeners' Chronicle*, I found the annexed directions as to planting trees, which seem to me so admirable, and so little known here, that I think them worthy of being quoted in the *Horticulturist*. I don't believe trees are ever planted so in this country—I at least never saw them, and yet, the philosophy is excellent. I remember seeing a small Deodar Cedar planted in this method at Eaton Hall, eight years ago, in holes 12 feet in diameter. Everybody, in this country, plants either in round or square holes.

Truly yours, HENRY WINTHROP SARGENT.

"All trees ought to be planted in pits of prepared soil. These pits ought to be 4 to 5 feet deep, and not less than from 12 to 16 feet in diameter, or to occupy from 16 to 20 superficial yards of surface. The pits should be *neither round nor square*, but *star-shaped*, or cross-shaped, of such a form as would be produced by placing one equilateral triangle upon another, or two parallelograms across each other, so as to form a Greek cross.

Fig. 1. Fig. 2.



"The object of departing from the *square or round form*, is to introduce the growing fibres of the young trees into the *firm* and *poor soil*, *by degrees*, and not *all at once*, as in the round or square hole method.

"When a tree is planted in the round or square pit, dug in hard, bad soil, it is much in the same situation as if *its roots were confined* in *a pot or tub*. The dovetailing, so to speak, of the prepared soil, and of the moisture which it will retain, with the hard, impenetrable soil by which it is surrounded, will gradually prepare the latter for being penetrated by the roots of the trees, and prevent the sides of the pit from giving the same check to these roots which the sides of the pot or tub do to the plant contained in it."

This advice is so admirable, that I trust you will publish it for the benefit of the few, and, I regret to say, they are very few, who are willing to take the trouble and expense to plant *properly*.

H. W. S.

Thanks to Mr. Wm. Bright, for a collection of new and beautiful bedding-out plants. Mr. Bright is establishing a commercial garden and nursery near the city of Philadelphia (in fact, in it), from which good results may be expected. We have none too many—indeed, we doubt if there are half enough. Mr. Buist leads the van with his extraordinary variety, and if it were not for him, we should not have many of the *novelties* which make the members of our Horticultural Society a sort of pioneers in America. Others are active and intelligent, and we are glad to see Mr. Bright about to be added to the list. From Joshua Pierce, of Washington, we have his "Perpetual Raspberry," which is under trial by a jury of his countrymen, who will all rejoice if it equals his expectations. Mr. Snow's verbenas promise already more than could have been expected. Ellwanger and Barry have kindly sent us two specimens of the great California tree, Sequoia Gigantea, in fine order, together with handsome plants of Cryptomeria Japonica, and the Cupressus funebris; the latter, in the form of young, unestablished plants, has not withstood the two last hard winters, but may yet be found hardy. The cryptomerias came out of their last trial better than usual, partly, we doubt not, from their increased age.

J. Jay Smith, Esq.—Dear Sir: As it is probable a number of your subscribers may possess the *Memorials of Bartram and Marshall*, published a few years since, the editor of that work would like to point out, while he may, some of his unlucky mistakes. Believing the *Horticulturist* to be an appropriate medium for the purpose, he begs permission thus to ask the owners of the volume to make, with a pencil, the *corrections* here indicated:—

At page 64, "the Virginian Guelder Rose" is inadvertently supposed to be the "*Spiraea opulifolia*, L."—when it was intended to write *Viburnum opulus*, L.! *At pages* 241, 244, 249, 258, and 411, a remarkable plant is mentioned by the names of "*Tipitiwitchet*," and "*Tipitiwitchet* sensitive," which the editor rashly conjectured might be "*Schrankia uncinata*, Willd.," or sensitive Brier: whereas, Prof. T. C. Porter, of Franklin and Marshall College, has conclusively shown, in the *Mercersburg Review* for March, 1850, that those names refer to the *Dionaea muscipula*, Ellis, now commonly called Venus's Fly-trap. *At page* 352, a "pretty kind of *Lychnis*" was heedlessly supposed to be the "*Arenaria stricta*, Michaux." It is not doubted, now, that the plant intended was the *Phlox subulata*, L. *At page* 422, a little "glorious evergreen" is mentioned; and, by a *lapsus pennæ*, suggested to be "*Cyrilla racemiflora*, L.;" whereas, it was intended, at the time, to write the true name, viz: *Ceratiola ericoides*, Michaux.

If these corrections may gain admittance to the "Editor's Table," or find a convenient place among the familiar "Gossip" of your valuable journal, the privilege will be esteemed a favor by your obliged friend and well-wisher, William Darlington.

Westchester Pa., May 8, 1856.

Hedges.—Before the *Horticulturist* for June appears, the season for setting hedges will have passed, and, consequently, enthusiasts will not be prevented from experimenting. Nor, indeed, is it desired by the record of the experience of the past unusually severe winter, to deter others from *demonstrating* the advantages of live-fence.

Occasional additions of plants—made necessary by depredations of mice—(*Aricola xanthognatus*), and annual trimming, having failed to produce closeness at bottom, part of the hedge (*Maclura aurantiaca*) was cut off near the ground, and headed-in twice during the season. The effect was satisfactory. My ardent desire to succeed, after years of trial, was about to be realized. Alas, for ardor!

Three months' covering, three feet deep, of snow, and consequent revelling of mice underneath, has cured my enthusiasm. For yards together in extent, not a particle of bark was left, six inches above, and three below the earth.

My only alternative was to dig it out and burn it; the former accomplished, the latter to do.

A beautiful and perfect hedge of Honey Locust (*Gleditschia triacanthos*), on the ground of a friend, is badly injured, if not ruined, by the same animal. J. K. Eshleman.

Downingtown, April 25, 1856.

Rochester, N. Y., May 2.—Fruit-trees are looking finely. Mice have eaten up whole orchards, nurseries, &c. We have but just *three* weeks in which to do our whole delivery for the season. Now we are planting with 250 men, having delightful weather for the work, and we are getting on finely. We have a good specimen of the Pampas grass—all in good time—and the Eugenia Ugni, but none for sale this spring.

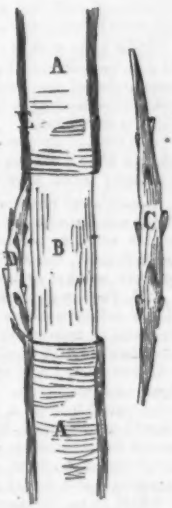
Very truly, yours, P. Barry.

New York Farmers' Club.—The Secretary read translated extracts from a paper in the *Revue Horticole* of Paris, Sept., 1855, by M. Klotzsch, of the Royal Academy of Sciences, Vienna, on the utility of hybrids. M. Klotzsch has crossed the *Pinus Nigricans* with the *Sylvestris*, the *Quercus robur* with the *Quercus pedunculata*. Their seeds produce trees, which, in eight years, are one-third larger than trees from the seed of the parents separately. They were all planted on the same day, and under similar circumstances.

The Secretary read a letter from Dr. Underhill, of Croton Point Vineyards, in which he suggests, that by planting plum-trees so as to overhang water, they are very certain to be free from the curculio and other insects, which are deterred by instinct from depositing eggs where they will be likely to fall into the water. The doctor commenced his experiments eight years ago, and now has about 200 plum-trees, the larger portion of which have come into bearing, and over 50 have produced fine crops of fruit—and during this time they have been entirely exempt from the ravages of all insects. The doctor constructed a small artificial lake, upon the margin of which the trees were planted.

Mr. Atwill, of Iowa, gave an interesting account of the climate, products, and social condition of that State.

Mice and Rabbits.—Mr. Editor: From different sources I hear of the depredations committed upon trees, the past winter, by the mice and rabbits. Thinking the method, whereby some can be yet saved (which will otherwise perish), may be new to some of your subscribers, I give it, claiming no originality, however, for it is old. The annexed figure may give you a better idea of the *modus operandi* than I could detail.



A, A. The trunk of a tree in part. B. The part barked all around. C. A crooked scion, prepared to insert. D. A scion, inserted into the bark below and above the girdled part. E. The bark of the tree.

Many trees of value are girdled all round, and, without something like the foregoing, cannot easily be saved.

I this evening finished fixing some of my most valuable trees, three inches in diameter, that have been barked all around for six inches from the surface of the ground upwards; they may be stuck all round the tree, which, when the sap begins to rise, may be communicated from the root to the trunk, above the girdled part; bank up the earth so as to cover the whole of the scions.

Where the girdle is but narrow, and near the ground, the banking of earth over it may sometimes save a tree, as there will be buds sent out from the bark above the injury, but it is not always sure.

Trees barked high up by the rabbits, may be treated in like manner, but, in that case, a grafting box must be used to cover the wounds, keep air out, &c. Trees treated thus ought to be staked, so as to prevent rocking about, otherwise the scions will not have a chance to grow fast. If you can make anything out of the above, and have nothing better on hand for the occasion, it is at your service; if not, all right, &c.

While on the subject of mice, let me tell those that are breathing out vengeance against the little vixens, that if they will prune their trees in the fall, throw the green brush under the trees, the mice will feed upon them, and let the trees alone, as I observe, invariably, that wherever I left cuttings or limbs under the trees, they were all peeled off, while the tree, but one foot off, was untouched. Let horticulturists mark this for the future.

S. M.

Calmdale, Lebanon, Pa., April 15, 1856.

[To prevent the ravages of mice another winter, tread the snow firmly round the trees the first time it falls, and keep up the process during the whole winter, after every successive fall.—Ed.]

The Smokehouse Apple.—I suppose you are aware that many of our Eastern nurserymen, and some of our own State, have been crying out against our favorite Lancaster County Smokehouse Apple, or, as it is called by some, Millcreek Vandevere, for the very reason of its being a straggling grower, and hard to raise a nice, straight stock; but when it becomes a large tree, it forms a fine head; to avoid raising it from root-graft, the better way is to graft or bud the same on a good, straight stock, standard height, and you will have a tree in a

short time that will bear you apples almost every year, and you will have an apple that can't be beat, taking all into consideration; it will come, too, in use for baking purposes the last of July and beginning of August.

I have eaten the last of mine this 14th day of May. We had them all along, for family use, through the winter till last week.

Now, Mr. Editor, can you point me out an apple that will go ahead of our Smokehouse? Were I confined to one kind of apples, I would select this.

Yours, &c. J. FRANTZ.

[We are just *now* much attached to the Northern Spy, for reasons known to ourselves and Mr. Watts!—ED.]

VEGETABLE WAX.—DEAR SIR: In the *Moniteur*, I see remarks about the Myrica Pennsylvanica, to the point. We have millions of pounds of that vegetable wax, which would make our soirées a little cheaper. I translate it:—

"In the *Moniteur des Comices*, we find some very useful hints on the production of vegetable wax. Beeswax will always command high prices, although we can raise any quantity of it in all the States, but the trouble and expenses to obtain it is a matter of great consideration in the market. Vegetable wax can be obtained much cheaper; we have the wax-tree well adapted to all our Middle and Southern States; besides, we have the myricas, which cover our swamps and wastes by the million. Mr. Kellerman states, that he made very fine wax candles of both the *myrica cerifera*, growing even in Canada, and the *myrica Pennsylvanica*, all over Pennsylvania. The wax is gathered from the seeds in the following way:—

"Fill bags with it; dip these in boiling water; the wax will soon come on the top, where it can be collected by spatula, or by letting the water off when cold; by submitting the remainder of the seeds to a process of boiling, we get a second quality of wax. The beeswax contains 0.91 of cerine, and 0.08 of myricine. The vegetable wax contains 0.86 of cerine, 0.13 of myricine."

Old settlers in the Southern States used to extract thát wax, which was their only candle at the time; we can do the same, and it will not cost half the price of the beeswax, all expenses taken together.

GAS-WATER FOR THE BUGS.—Another remark, in the same paper, may prove very useful for the destruction of bugs, insects, &c., attacking the roots of trees, chiefly the fruit-trees, which seem to be more exposed to their attacks than any other of nature's productions; undoubtedly, because improved fruits are the result of art and human skill, and, consequently, weaker or sweeter than the sturdy native or spontaneous productions.

"M. Fesjier applied to his currants, gooseberries, and pear-trees, covered at the time with lice, a mixture of one-half of the ammoniacal water from the distilleries of the coal gas, and one-half of rain or well water; he poured that composition, with a water-pot or spout, all over bushes and trees; the result was the immediate destruction of the lice, and when the soil was stirred and removed at the foot of the plants, all the bugs, larvæ, &c., were found dead and destroyed. This solution ought not to be *strong*. Perhaps it would do better to take two-thirds of a barrel of distilled gas-water, and one barrel of common water. We should recommend, moreover, to do it in a rainy or cool day, when the action of the sun would not shrink or injure the leaves. I am satisfied that the above proportion would never harm the trees, and as effectually kill the insects. Soapsuds have the same result, but it is easier to get any quantity of ammoniacal water than such a quantity of soapsuds.

"Salt, in moderate quantity, has a very good result, but its use for trees is not so safe—at least, when we do not take a just proportion. One pound of salt, in a radius of four feet from the body of the tree, will not injure the roots, and kill a great deal of those nuisances."

B.

SAVANNAH, GEO., April 23, 1856.

J. JAY SMITH, Esq.—It is delightful to be in a summer climate so early, and to see everything almost in full leaf. They have the most beautiful shade trees here that I ever saw in any city; the finest are the oaks, a species called water-oaks. Every few squares an open one occurs, on all the principal streets, and these are filled with these and other trees, making the most beautiful moonlight views imaginable. The flower gardens are in full splendor (in April). Every morning, before breakfast, you can buy in the market fine bunches of roses for a quarter of a dollar. Green peas are plenty; strawberries there are, but, owing to inattention, very scarce. The yellow jasmine is out of bloom, but as we came down from Macon, nearly two weeks ago, the woods were filled with it. Truly yours.

GARDENERS.—MR. EDITOR: I was much pleased with your remarks on Robert Meston's letter, about gardeners; it is the greatest mistake that a young man can make, to suppose that respectability means absence of labor; it is folly to say that the professions of law or medicine are more genteel than gardening, or any other handicraft work. A skilled workman is more independent of charity, and in a more respectable and reliable position in society than the skilled clerk, or the skilled professional man, so far as the mere callings of each are concerned. A late emphatic writer asserts truly, that a larger proportion of the clergymen, doctors, salesmen, tradesmen, merchants, speculators in land, and planters, of his country, are involved in debt, and will never pay their debts, than of the laborer, yeoman farmers, mechanics, and artisans. Sensible and industrious farmers and nurserymen, who have started in life with no capital but a good common school education, and a good farm-boy's skill, and strength for labor, more often spend a happy and grateful old age among children and children's children, of whom they are proud, than men of any other calling.

The idea that a muscular, or handicraft occupation, if directed with the genius and thought it always may and should be, is lower or less fortunate, or less likely to be attended with honor in a free country, than the occupations of transfer, copying and adapting forms and precedents, is a most false and pernicious one. Genius, taste, energy, and dexterity, as well as capital in general knowledge, and culture of mind, are even more valuable, and are at this time more wanted in our market, and are better paid for in the artisan and mechanic, than they are in the tradesman or professional man. As to gardeners, it will not do to say they are under-paid; they receive twice as much as a farm-hand, and, with the education they acquire in their apprenticeship, even if they have not talent above the grade of an ignorant field-laborer, they are sure, with steady habits, to arrive at an enviable and happy social position. AN OLD GARDENER.

THE "NEW ROCHELLE" BLACKBERRY.—I wish to learn from practical cultivators, through the "*Horticulturist*," how the "New Rochelle" Blackberry has endured the severe cold of the last winter in the latitude of Boston and southern New Hampshire. I find all parts of the plants in my grounds, that did not get buried in the deep snow, *killed*, as also are the "Improved High Bush," or Dorchester Seedling. The "New Rochelle" having been recommended as *perfectly hardy*, and mine not proving so, thus far, has led me to make the inquiry of the readers of the "*Horticulturist*," which, by the way, gives very general satisfaction to all its readers with whom I have conversed, in EASTERN MASSACHUSETTS.

FOOD FOR TRAVELLERS.—"Wholesome water, and wholesome, fresh fruits, are not to be obtained by the traveller, in the largest part of the United States. Bacon, fat, and salt, is the stock article of diet. He must satisfy his appetite with this, or with coarse or most indigestible forms of bread. In either case, he will have an unnatural thirst, and the only means ordinarily offered him, at country-houses, for satisfying this, will be an exceedingly dirty and unpalatable decoction of coffee, of which the people usually consume an excessive quantity; or alcoholic liquors, of the most fiery and pernicious description.

There is no reason, I believe, why every farmer in the Union should not now make a wine for his family use, which, with most persons, would be most advantageously and economically substituted for coffee and tea, and which use would soon make more palatable than any other beverage, for ordinary purposes."—*Olmsted's Seaboard States.*

CITY TASTE FOR RURAL THINGS.—The Parisians have inaugurated horse-meat as an article of excellent food, much to the horror of John Bull and his brother. Punch says: "We do not believe that even Soyer, with all his arts, could render horse-flesh palatable, or that a *fricandeau de* cab-horse, or *cotelettes* of Shetland pony, will ever become an acceptable dish. We must look forward to the time when, from eating horses, the members will proceed to eating asses, and thus by an easy and natural step, arrive at the point where they will begin eating each other. In this way, the society may possibly be extinguished, if it does not previously poison itself quite out, by the trash it feeds upon."

A BIT OF FUN.—The President of the club mentioned below, allows us to extract the following proceedings from the "regular minutes":—

FARMERS' CLUB, AT CLIFTON, NEAR CINCINNATI.—At a meeting of the *Amateur* Farmers of Clifton, held recently at the School-house, the following interesting discussion took place:—

Col. B. was called upon to preside, and John Quill appointed Secretary.

Upon taking the chair, Col. B. remarked, that the object of the meeting was to discuss subjects connected with agriculture, and the more important branches of horticulture—as

for floriculture, he would leave that to the ladies. For himself, he was willing to impart such information as he had derived from ten years' experience as an amateur farmer, in hopes that the members present would express their views frankly on topics so interesting to all.

The subjects for discussion would be—The mode of preparing the ground for crops, manures, and their application; crops cultivated; rotation in crops, and modes of culture; the orchard; the garden; the poultry and the pig yard; and the dairy, and stock raising, &c. &c. Each of these deserved, and he hoped would receive, due consideration.

To commence, he would call upon *Farmer R.*, to state his experience in *subsoil ploughing.*

Deacon R. said that he was not entirely satisfied with his experiments in that way. He had employed a team of seven yoke of oxen, with five Irishmen as *aids*, on a three acre field, for about ten days, with the subsoil plough; broke two ploughs, and had to pay for one of the oxen, for want of knowledge on the part of the Irishmen how to manage the *bastes;* had thought that the work might have been done better and cheaper with the spade.

Farmer R. B. thought the *Irish plough*—the spade—was the best, in the long run, for *amateur* farming.

Farmer W. R. was of that opinion *decidedly.* He had trenched, with the spade, three and one-half acres, two feet deep, and under-drained it with tile, at an expense of not over $165 per acre.

Deacon S. would prefer three feet deep; it would cost about fifty per cent. more. Had tried it on his garden, and was well satisfied with the result.

The *Chairman* stated that he was then experimenting in that way on a hill-side of several acres, but as to the *cost* he could not say, for he had long since burnt his books of farming expenditures as vexatious tell-tales.

W. R. said he had done the same thing with his mementos of that kind, considering them nuisances.

The Chairman asked for the experience of the members in *planting.* He would give his own. He was an admirer of *forest trees*, for their beauty and utility. Most of those on his farm, however, were, unfortunately, in the wrong place, and he had to cut them down and plant young ones in the place where the old ones *should* have stood. Planting his *fruit-trees* near the canal, he found to be an ingenious contrivance to keep depredators from his vegetables, as long as the fruit lasted.

Farmer D. said he had the same experience with his fruit, and had now to buy apples for family use.

Brother W. had found planting fruit-trees near the roadside to answer the same purpose. Other members concurred in this opinion.

Farmer S. had planted forest-trees around part of his farm, but more with a view to grow fuel than rail timber. In fruit planting, he had selected the dwarf-trees, being more convenient for children and visitors.

W. R., by high manuring, had lost most of his pear-trees by blight.

Brother W., by high culture, produced an immense growth of wood on his pear-trees, *but no fruit; he had taken them up and root-pruned them.*

Farmer B. had tried a coating of coal tar on some of his young fruit-trees, to prevent the rabbits from girdling them in winter. The remedy kept off the rabbits, *but it killed the trees.*

"Poultry" was next called for by the Chair.

Deacon S. said he would give in his experience. His poultry yard was unexceptionable, and he had procured some of the finest heavy-bodied, short-legged *Cochin-China* fowls, at $25 per pair, and *Brahma* Pootas at $20, tall enough to pick corn off the head of a flour-barrel—(*Shanghais* he considered a humbug)—but he had been more successful in rearing fancy chickens than in *keeping* them, for they were nearly all stolen in one night, about the time they were fat enough to eat.

A new member remarked that the same accident had happened to his harness and garden-tools, though he had no doubt but it was a very honest neighborhood. [The Chair called to order.]

Farmer R. said that he had been tolerably successful with fancy chickens. Had reared about half the broods, and succeeded in keeping and selling them. Part of his stock had been spared to *Brother S.* (Here *Brother S.* groaned in the affirmative.)

Farmer F. B. found no trouble in raising chickens; but his valuable English greyhound *would* eat them up about the time they were half-grown.

Farmer M. preferred the common stock. With proper attention, he generally raised *half* the broods.

Farmer B. said he had an old hen that could beat that; she seldom lost any; but he

had some bad luck with the rest of them. In one night, four turkeys and six fine hens were stolen from him. One of the hens was a fancy Cochin China, that he was petting up to *sell to Brother S., at a fair price.* On another night, fifteen of his best fowls were killed by a rascally mink.

After some desultory remarks amongst the members, an adjournment was carried to meet at the same place on Saturday, the 17th inst., at early candlelight. The next subject before the meeting to be the culture of *vegetables.*

JOHN QUILL, *Sec'y.*

THE LADIES.—It used to be said that ladies were "those pinks, carnations, roses, and tulips, that required the protection of a bonnet!" Where are all these beauties of the streets; the bonnet part, at least, has disappeared.

EXTENSIVE ESTABLISHMENTS.—Among the many large establishments in this city, there are none, perhaps, that possess more interest to all classes of the community than those in which fruit and other luxuries peculiar to the summer and autumnal seasons are preserved, in all their flavor and sweetness, for use in winter and spring. A few years ago, this was a very trifling business, but enterprise and energy have built up a trade in Philadelphia, amounting, in the aggregate, to upwards of $300,000. Employment is given to several hundred persons during the year, and, in one establishment, nearly $12,000 were paid out for wages during the fruit season of 1855. The capital invested in an establishment of this kind, is far greater than a mere cursory glance through it would seem to indicate. In the preparation of the various kinds of fruit, there is a vast amount of care and prudence required, as some kinds have to be cooked before being put in cans and bottles, while other varieties only demand a certain kind and quantity of syrup. This is considered the most difficult portion of the business, and experience has taught many housekeepers that the knowledge of these two important matters—cooking and making syrup—are of greater utility than luck; for, where the latter is depended upon solely, losses of time and money much more frequently occur than where the parties have the facilities for preserving the fruit, and possess the knowledge of having it properly attended to.

The two principal dealers in this city are Mr. Mills B. Espy, No. 109 South Third Street, and J. L. Wendell, No. 152 South Front Street. Mr. Espy does much the largest business, and has a building 27 by 120 feet, and 5 stories high, in which every department is carried on extensively. The cans used are made in the building, the sealing-wax prepared, the fruit cleaned, pared, cooked (when rendered necessary), and put up, ready for foreign markets, or home use. Some idea may be formed of this trade when we state, that among the articles put up in Mr. E.'s establishment, in 1855, were upwards of 20,000 pounds of cherries, 10,000 quarts of strawberries, 4,000 baskets peaches, 6,000 baskets tomatoes, 3,000 bushels plums, 100 bushels gages, 100 barrels quinces, 15,000 pine-apples, 1,000 bushels of gooseberries, 2,000 bushels each of corn, peas, and beans, besides 300 hogsheads of pickles, &c. Although a comparatively small quantity of oysters are put up here, nearly 12,000 cans were prepared in this house, as well as thousands of cans of fresh beef, mutton, veal, milk, and other articles. The cooking of Mr. Espy is all done by steam. The apparatus is constructed in a superior manner, and, from the peculiarity in cooking the fruit and vegetables, and preparing the syrup by the same agency, the flavor and delicious taste are preserved, and, when eating the articles prepared, it seems as if they were fresh from the vines or trees.—*Philadelphia Ledger.*

DWARF CHERRIES AND PEARS.—We have found great pleasure in the cultivation of dwarf cherry-trees, and observe others are planting them. Cherries, as bushes on the mahaleb stock, root pruned, should be planted four feet apart. The root pruning should be done towards the end of September, and will be facilitated if the bushes are planted on a little mound. Dig a trench round the tree, and introduce the spade below, to cut off all the perpendicular roots; thus, all the spreading roots are shortened, precisely as is done with dwarf pears; this may be done with a knife, and the ends brought to the surface, previously filling in the trench with light, friable soil, and covering with the soil taken out of the trench; no dung, or manure of any kind, is required, as this stock flourishes on the poorest soils. Some short litter, or half-decayed leaves will, however, be of much benefit, placed on the surface, near the stem. If not root-pruned, they should be six or eight feet apart, as they are very apt to get large and lose the character of dwarfs; great attention should be given to pinching the new growth to within three or four buds of the old wood, leaving the leading

shoots untouched till the middle or end of August, when they must be shortened to eight or ten buds. The three varieties, or groups, those of the habit of the Morello tribe, the Bigarreau family, including the Heart Cherries, and those of the compact habit of the May Duke, should be planted in separate rows. For potting, and forcing, cherries on the Mahaleb stock, are highly eligible, as they do not gum, and are very prolific. They are often infested with aphides and ants, but we have not found these insects injurious to any great extent. B.

IMPORTANT.—His Majesty, the Emperor of France, has "graciously expressed his consent to the proposal that he should be elected an honorary member of the Royal Agricultural Society of England," and a diploma and sixteen bound volumes of the *Transactions* of the Society have actually been forwarded to him! He is a capital farmer, and irrigates with his people's blood; he may some time take it into his head to manure with "superphosphate" from English bones, as the English did with the bones from Waterloo.—*Figaro.*

Horticultural Societies.

COLUMBUS (OHIO) HORTICULTURAL SOCIETY.—The annual meeting of this Society was held at the Society's room, on Saturday evening, April 5—the President, M. B. Bateham, Esq., in the Chair.

Three varieties of apples were exhibited, viz: Willow, Liberty, and Romanite, each in a good state of preservation.

Some very interesting remarks were made in reference to the effects of the late winter upon fruit-trees, in this and other sections of the country. In particular localities, little, if any, injury has been done; while, in others, the effects have been disastrous.

The following gentlemen were chosen officers for the current year: *President*—M. B. BATEHAM. *First Vice President*—BENJAMIN BLAKE. *Second Vice President*—ALEX. E. GLENN. *Treasurer*—HENRY C. NOBLE. *Recording Secretary*—ROBERT HUME. *Corresponding Secretary*—HENRY C. NOBLE. *Council*—FRANCIS STEWART, GEORGE GERRY, WILLIAM G. DESHLER. *Garden Committee*—HENRY C. NOBLE.

AT the annual meeting of the Hartford County Horticultural Society, held on the 12th of April, the following officers were elected for the ensuing year, viz: *President*—WILLIAM W. TURNER. *Vice-Presidents*—JOHN M. NILES, JOHN S. BUTLER, HENRY W. TERRY, Hartford; HENRY MYGATT, Farmington; CHARLES L. PORTER, East Hartford; NOAH W. STANLEY, New Britain; NORMAN PORTER, Berlin; E. A. HOLCOMB, Granby; SALMON LYMAN, Manchester; S. D. CASE, Canton; H. A. GRANT, Enfield. *Recording Secretary*—DANIEL S. DEWEY, Hartford. *Corresponding Secretary*—THOMAS R. DUTTON, Hartford. *Treasurer*—P. D. STILLMAN. *Auditor*—H. L. BIDWELL. *Standing Committee*—WM. T. TUTTLE, H. W. TUTTLE, H. W. TERRY, EDWARD GOODRIDGE.

BROOKLYN HORTICULTURAL SOCIETY.—This Society held its first general meeting on the 16th and 17th inst., and it has not lost any of its former superiority. To enumerate all the best things that were there, would require more space than, I presume, you have at present to spare. Suffice it, then, to say, that the plants were more than excellent. It has been a custom, hitherto, for us to be continually reverting to the quality of Chiswick, but, in this instance, at least, there is no occasion to do so, for the greater part of the specimens exhibited were all that the best skill of the cultivator can accomplish. All plant lovers who were not there, missed a great treat, and the opportunity of seeing the difference between what are ordinarily termed good, and the best *specimen grown* plants. The fact was there clearly demonstrated, that we can grow to perfection in our climate, notwithstanding the general say to the contrary, the *Boronias* and *Pimelias* of Australia, and the *Ericas* of Caffraria, for they were produced in the most magnificent bloom and robust health. Erica Boweana, and Pimelia spectabilis, were each over three feet in diameter. The azaleas were really gorgeous, and the more intertropical examples were equally represented. Taken as a whole, it is doubtful if such an elegantly-formed and well-grown collection of plants was ever before seen in the States, and we may hope that the men who produced them will be able to continue their exertions until the general host of scarecrows, which are too often seen, become numbered with the things that were. W. C.

PENNSYLVANIA HORTICULTURAL SOCIETY.—The stated meeting of this Society was held at Concert Hall, on Tuesday evening, April 15, 1856, M. W. Baldwin in the chair. The following awards were made by the Committee on Plants and Flowers:—

Roses—twelve plants, twelve varieties—for the best to Henry A. Dreer; for the second best to John Pollock, gr. to James Dundas. *Azaleas*, dwarf variety, *Specimen Plant*—for the best to the same. *Hyacinths*, six plants, six varieties—for the best to Peter Raabe. *Pansies*, ten plants—for the best to Henry A. Dreer; for the second best to James Thomas, gr. to Jas. D. Whetham. *Collection of twelve Plants*—for the best to Isaac Collins, gr. to Gen. Patterson; for the second best to John Pollock. *Collection of six Plants*—for the best to Chas. Sutherland, gr. to John Anspach. *Specimen Plant*—for the best to Chas. Sutherland, gr. to John Anspach; for the second best to Thos. Robertson, gr. to B. A. Fahnestock. *New Plants*—two dollars for Boronia Drummondii, B. serrulata, and Gastrolobium trilobatum, to Thos. Robertson. *Table Design*, new and tasteful—for the best to Barry Higgins, gr. to D. R. King. *Basket of cut Flowers*, averaging sixteen inches—for the best to J. J. Habermehl, gr. to John Lambert. *Basket* (over sixteen inches)—a special premium of two dollars to Barry Higgins. *Bouquets*, over eight inches—a special premium of two dollars to J. J. Habermehl.

Special Premiums.—For a beautiful collection of Verbenas and Stocks, two dollars to J. J. Habermehl; for a fine collection of Cinerarias, two dollars to Chas Sutherland; for a collection of Cinerarias one dollar, and for a beautiful Seedling Verbena, one dollar to Robert Buist; for a fine collection of Plants, two dollars to Thos. Robertson; for a collection of Mimula's, one dollar to James Thomas; for a rare collection of Orchids, three dollars to John Pollock, and for a beautiful pair of vases filled with Hyacinths, five dollars to Peter Raabe.

By the Committee on Fruits. *Special Premiums*—five dollars, for two varieties of Grape Vines, in full fruit,

the Grizzly Rontignac, and Black Hamburgh, grown in pots, to Wm. Bright, gr. to Jos. S. Lovering; three dollars, for a display of cut bunches for grapes, consisting of five varieties: Hamburgh, Frankinthal, Cochin China, White Fontignac, and White Muscat, to Mark Hill, gr. to M. W. Baldwin.

The Committee called the attention of the Society to specimens of Peaches preserved in tin cans, hermetically sealed, which retained the flavor of the fresh fruit to a remarkable degree, presented by Edward Tatnall, of Wilmington, Del.

By the Committee on Vegetables. *Cucumbers*, two specimens—for the best to Mark Hill, gr. to M. W. Baldwin. *Special Premium*—one dollar, for six heads of fine Lettuce, to J. J. Habermehl.

Four gentlemen were elected resident members.

OBJECTS EXHIBITED.—*Plants* from the conservatory of Gen. Patterson—collection of twelve—Azalea, a white Seedling, Chorozema varium, Acacia pulchella, A. speciosissima, A. coccinea, A. elegans, Begonia sanguinea, B. manicata, Franciscea latifolia, Euphorbia splendens, and White Banksia Rose. Specimen—Yellow Banksia Rose.

From James Dundas's houses.—Collection of twelve—Cuphea platycentra, Genista hybrida, Centradenia rosea, Begonia nitida, B. laperousia, B. manicata, Gardenia Stanleyana, Franciscea eximia, Chorozema varium, Vinca alba, Mahernia picta, and Cyrtoceras multiflora. *Specimens*—Conoclinum ianthemum, dwarf Azalea variegata. *Orchids*—Phælanopsis grandiflora, Cattleya marginata, Dendrobium agregatum, and Oncidium flexuosum. Twelve Roses—Terre de St. Cyr, Cels, Compte de Paris, Devoniensis, Souvenir de Malmaison, Lyonais, Madam Bousanque, Agrippina, Hermosa, Vicompt de Cayes, Saffrana, and Aurora.

From B. A. Fahnestock's greenhouses.—Collection of twelve—Polygala, Dalmatiana, Epacris lævigata, Tropæolum Jaretii, Chorozema varium, C. elegans, A. albo-maculata, A. splendens, Cytisus racemosus, Geranium Jehu superbum, Mahernia odorata, Camellia de Etna superba, and Correa speciosa. *Specimen*—Pimelia spectabilis. *New Plants*—Boronia Drummondii, B. serrulata, and Gastralobium trilobatum.

From John Anspach's houses.—Collection of six—Ixora coccinea, Franciscea confertiflora, Azalea variegata, Bletia Tankervilliæ, Deutzia gracilis, and Stretilizia reginæ. Specimen—Tropæolum tricolorum, Azalia indica alba, and a number of Cinerarias.

From John Lambert's houses.—A collection of Verbenas and Stocks.

By Henry A. Dreer.—Twelve Roses—Lion du Combat, Madame Elliott, Madame Remont, Brion, Madame Braay, Bougere, Hermosa, Archduke Charles, Madame Bredell, Solfatere, Phaloe, and Fortune's Double Yellow, and ten Pansies.

By Robert Buist.—Six fine Cinerarias and a Seedling Verbena (Jack).

From James D. Whetham's.—Collection of ten Pansies, and another of Mimuli.

By Peter Raabe.—Two very large vases of Hyacinths, growing in moss, and twelve pots of Hyacinths.

Designs, &c.—By D. R. King's gr.—A beautiful and novel table design, and a fine basket of flowers.

By J. J. Habermehl.—A basket, and pair of bouquets.

By Robert Kilvington.—A bouquet.

By J. F. Knorr's gr.—Three bouquets, not in competition.

Fruit.—From Jos. S. Lovering's grapery.—Two pots of Grape-vines in fruit—the Hamburgh and Frontignac.

From M. W. Baldwin's.—Cut bunches of five kinds of Grapes.

From E. Tatnall, of Wilmington, Del.—Cans of preserved Peaches, hermetically sealed, preserving the freshness of the fruit.

Vegetables.—By M. W. Baldwin's gr.—Cucumbers and Lettuce.

From John Anspach's.—Holloway's Defiance Cucumbers.

From D. R. King's.—Mushrooms.

From John Lambert's.—Fine Lettuce.

Calendar of Operations.

JUNE.

BY WILLIAM SAUNDERS.

VEGETABLE GARDEN.—Thinning, hoeing, and cultivating the growing crops, are the principal routine operations. Fork the ground between the rows of onions, carrots, and, indeed, all crops that it is desirable to keep in active growth, and the drier the weather, the more necessary the operation. The advantage of drained soils will again be apparent from the continued vigor and growth of the plants upon them. The increased porosity of the soil, consequent upon the admission of air to all its parts, enables it to absorb, to its fullest extent, the rain-water as it falls from the clouds. On the other hand, undrained lands (unless gravel or sand) cannot absorb an appreciable quantity of water during a heavy summer shower. It runs off at the surface to the lowest point; for this reason, drained lands really contain and have constantly present, more moisture than those unventilated.

Parsnips and beets may be transplanted to fill up vacancies; these will grow readily, if dull weather can be had for their removal; if not, pick off most of their leaves, to lessen their evaporating surface.

CELERY.—Young plants, at least for the early crops, should be transplanted from the seed-bed into a rich pulverized soil; set them about three inches apart, and they will remove with small balls of roots when wanted for final planting.

The striped bug is frequently on hand just as young melon and cucumber plants are at their most tender stage. We have seen them completely routed by watering the plants with a liquid mortar of clayey soil and cow manure, without any apparent injury to the young plants.

Mulching.—If possible, mulch between the rows of all crops, short grass from lawns, refuse hay, leaves—anything, in fact, that will loosely cover the ground, should be employed for this purpose. This will retain the moisture, and very effectually prevent the growth of weeds.

Hardy Fruit.—The results of the past severe winter are now becoming apparent. Young fruit-trees that were seemingly unhurt, and commenced growth as usual, have produced a few sickly leaves, of a yellowish color, and ceased growing. On examination, it will be found that the bark is discolored, and parts easily from the wood, especially on the south side of the stem. They should be cut down at once to healthy wood.

Pears on Quince.—There are various opinions on the merits of so-called dwarf pears. We are too liable, in our horticultural zeal, to push matters to extremes. It requires a long series of well-tried and closely observed experiments to establish a horticultural fact. With the same treatment, a Bartlett will fruit as early on the pear as a Glout Morceau on the quince stock, and, in nine out of ten cases, the latter will excel the former in growth. No doubt, grafting the pear on the quince was at first resorted to, with a view of rendering a few of the most luxuriant growing varieties more productive, and their success led to an indiscriminate use of the quince as a stock for the pear, without reference to the degree of vigor possessed by the numerous varieties. The same has happened with roses, and *budded* roses are now condemned by many, although amateur rose growers well know that many of their finest sorts are never seen in their greatest perfection, unless grafted on a suitable stock. Many pears grow with great vigor even on quince, and, unless skilfully managed during summer, by checking growth, they will not fruit earlier than when on a pear stock.*

The most essential point in the culture of fruit-trees undoubtedly lies in summer pruning. Without this, our best treatment will not prove continually remunerative.

Strawberries.—Clean away all the young runners, unless required for increase, and keep the plants distinct, and free of weeds.

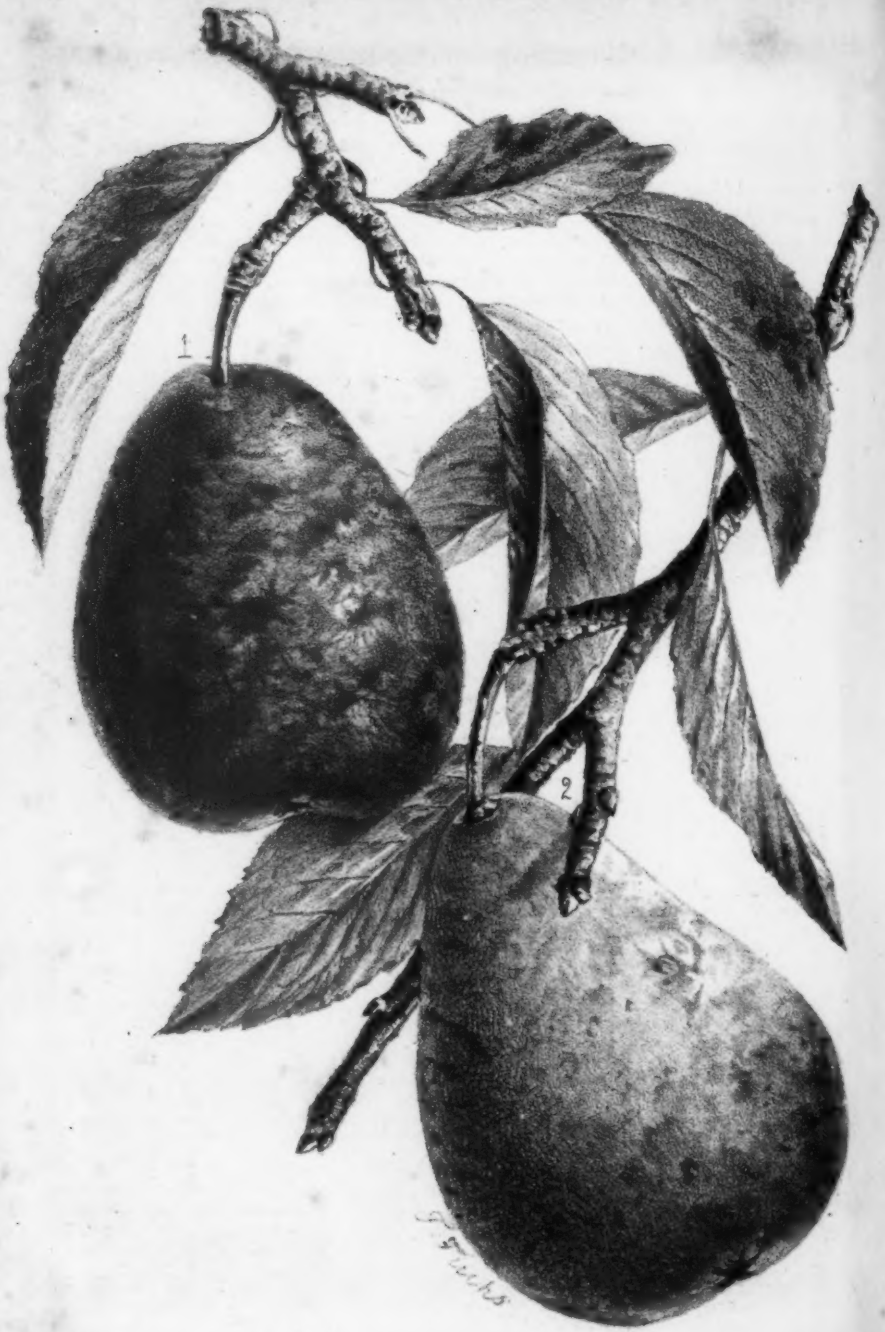
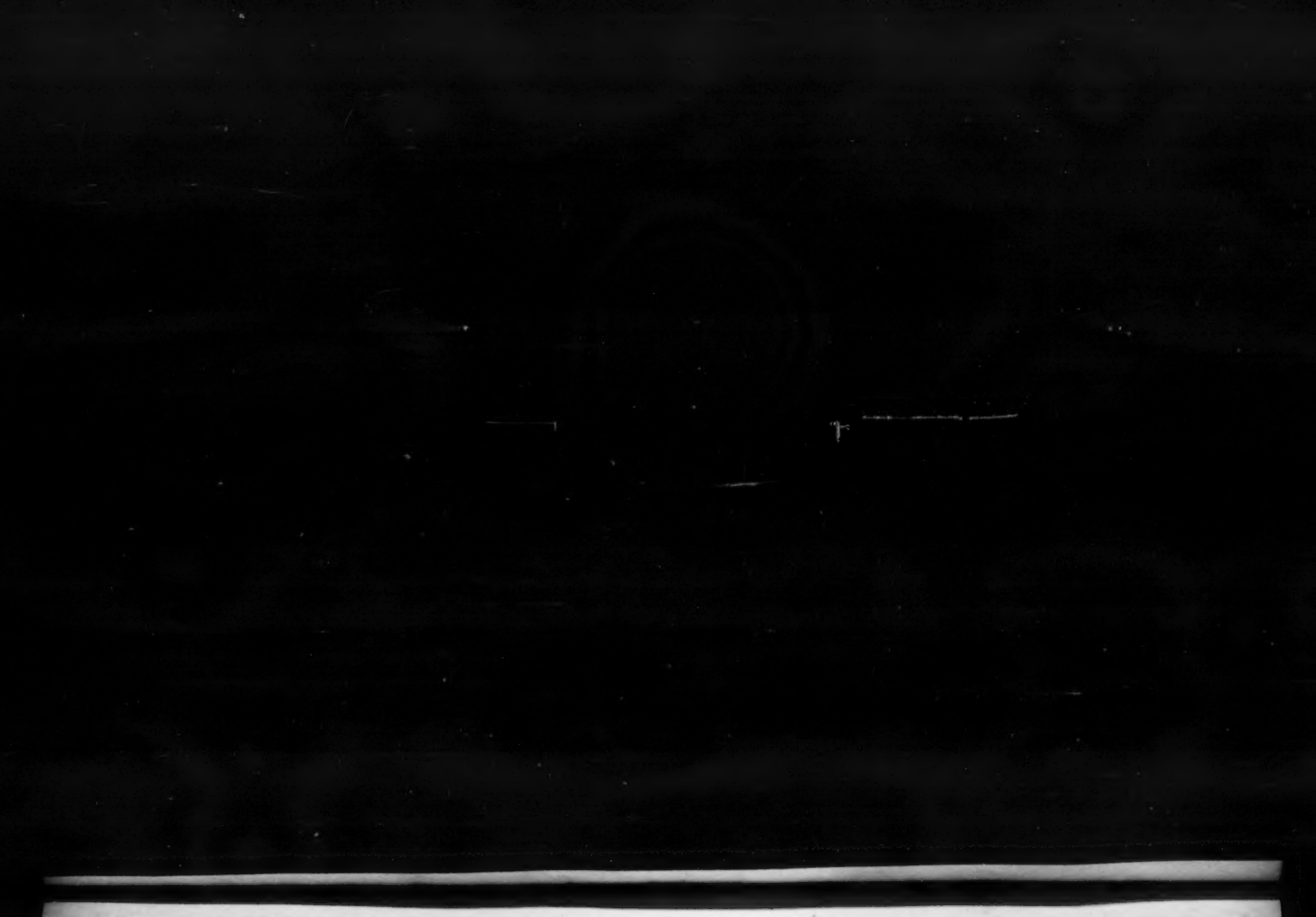
Raspberries.—Thin out the *young* canes as they grow, and cut out the old stems as soon as the fruiting season is over.

Grapes.—Pinch the points out of the fruit bearing branches four or five eyes beyond the fruit, but do not, as yet, disturb any of the lateral, or young side shoots, from the present year's growth. Thin the branches to one for each shoot. It is a notorious fact, that most of our hardy grapes are rendered unhealthy and unproductive through excessive cropping.

Grapery.—Thinning the bunches having already been attended to, thinning the berries will now require attention. Shouldered bunches may require tying up and spreading to allow the berries to swell. It is difficult to establish definite rules as regards the exact amount of fruit a vine is able to mature. Attempts have been made to form rules according to the diameter of the stem. This may be found tolerably accurate when all are under similar treatment; but a well-ripened cane, half an inch in diameter, may perfect a crop of eight lbs., when a cane double the thickness, would not ripen as many ounces. It is not the quantity or size of shoot that is all-desirable, but its quality as regards matured growth. The great error, in most of our horticultural advice, is a tendency to generalize upon insufficient data. It is a mistake for any one to suppose, that what he finds good for his own guidance, under *his* system of management, will be equally suitable for the million under *their* various modes of management. Keep the atmosphere moist by frequently sprinkling the house with water; this will tend to prevent mildew, but when it does show itself, use sulphur dusted over the house. Syringe the vines occasionally, but dashing water through a force pump on the tender foliage, is not beneficial or natural. Ventilate exclusively by the top, and leave them open, to a certain extent, both day and night. If managed as above, there will be no danger of bad colored grapes. "Ventilate early in the morning, and shut up early in the evening," is common advice, and those who adopt such a course need not be surprised if their fruit is deficient both in color and flavor. *The fruit will ripen earlier when the temperature is kept cool in the absence of light.*

Vines that are treated on the short spur pruning system, must be stopped an eye, or, at most, two, above the fruit bunch. It is well to encourage all growth that is possible. *Close* summer pruning is sooner or later ruinous to the plant if persevered in. We confess to having advocated a different course several years ago, but experience, that best of all monitors, has taught us otherwise, and, as a celebrated writer has remarked, "of what use is life without the hope of improvement?"

* [The period when dwarf trees require attention from the *pincher* having arrived, we refer the learner to Mr. Barry's book of fruits, and particularly to the volume of the Horticulturist for 1853, page 254, for information on the subject.—Ed.]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